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PAPER AND BOOK CO. LTD.  
LONDON, ENGLAND

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# LABOUR

VOL. 61 NO. 1

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## IN THIS ISSUE

The Employment of Women in the Construction Industry

Report on the Labour Market of the U.S.A.

Unemployment Insurance From Unemployment Insurance

The Unemployment Insurance in the U.S.A.

The Unemployment Insurance in the U.S.A.

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The Monthly Labor Review is published by the Bureau of Labor Statistics, U. S. Government Printing Office, Washington, D. C. Price, 30 cents a copy. Subscription price per year in the United States, \$3.50; elsewhere, \$4.75.

# MONTHLY **LABOR REVIEW**

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

## CONTENTS

JULY 1945, Vol. 61, No. 1

### *Special articles:*

	Page
Site employment in postwar new construction.....	1
Wages in the basic lumber industry in the Far West, 1944.....	14
Employment resulting from United States exports, 1939.....	37
Freedom—How can we achieve it?.....	39

### *Wartime policies:*

Policy on 48-hour week in areas with cut-backs.....	44
War Labor Board ruling on wage or salary increases.....	45
Recommendations to meet manpower needs in copper industry.....	45
New draft rules.....	46
Hours of work of prisoners of war.....	46
Changes in Canadian manpower policy.....	46

### *Employment conditions:*

Site employment in postwar new construction.....	1
Employment resulting from United States exports, 1939.....	37
WMC placements in war production, 1942-44.....	49
Downgrading agreement in the aircraft industry.....	51
Labor conditions in copper mining in Peru, 1939 and 1945.....	52

### *Postwar reconstruction:*

Canadian program for maintaining employment and income.....	56
China's plans for postwar industrialization.....	60
Measures to meet postwar labor conditions in Egypt.....	62

### *Discharged soldiers:*

Directives on reemployment of veterans.....	65
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### *Social security:*

Belgian social-security acts, 1944-45.....	67
Guaranteed weekly pay for British building labor.....	71
Unemployment compensation in meat-packing industry in Uruguay..	72

### *Industrial injuries:*

Fatal work injuries in shipyards, 1943 and 1944.....	75
Industrial injuries in manufacturing, first quarter of 1945.....	87

### *Industrial relations:*

Collective agreement in Colombian petroleum industry, 1944.....	91
Establishment of labor-management committees in France.....	92

### *Industrial disputes:*

Strikes and lockouts in May 1945.....	64
Activities of U. S. Conciliation Service, April 1945.....	96

<b><i>Labor laws and decisions:</i></b>	<b>Page</b>
Recent decisions of interest to labor.....	98
<b><i>Women in industry:</i></b>	
Living costs of working women in New York, 1944.....	103
<b><i>Wage and hour statistics:</i></b>	
Wages in pottery manufacture in East Liverpool area, October 1944....	105
Wages in the basic lumber industry in the Far West, 1944.....	14
Trend of factory earnings, 1939 to April 1945.....	109
Salaries of city school employees, 1944-45.....	110
Brazil—Wages and employment, 1944.....	112
Canada—Hours and earnings, November 1944 and March 1945.....	114
Colombia—Industrial real wages, 1938-44.....	116
<b><i>Wage and hour regulation:</i></b>	
Wage order for Puerto Rican cigar and cigarette industry.....	118
Five-day week in Australia.....	118
Regulation of home work in Cuba.....	119
British Wages Councils Act, 1945.....	120
<b><i>Cost of living and retail prices:</i></b>	
Cost of living in large cities, May 1945.....	124
Supplies of food in independent retail stores, May 1945.....	128
Retail prices of food in April 1945.....	129
Cost of living and wages of petroleum workers in Venezuela, 1944....	136
<b><i>Wholesale prices:</i></b>	
Wholesale prices in May 1945.....	138
<b><i>Labor turnover:</i></b>	
Labor turnover in munitions and nonmunitions industries, 1943 and 1944.....	143
Labor turnover in manufacturing, mining, and public utilities, April 1945.....	151
<b><i>Building operations:</i></b>	
Building construction started in urban areas, May 1945.....	156
<b><i>Trend of employment, earnings, and hours:</i></b>	
Summary of reports for May 1945.....	159
Industrial and business employment.....	159
Public employment.....	160
Employment on shipbuilding and repair.....	162
Construction employment.....	163
Detailed reports for industrial and business employment, April 1945:	
Nonagricultural employment.....	164
Industrial and business employment.....	165
Indexes of employment and pay rolls.....	167
Average earnings and hours.....	175
Trend of factory earnings, 1939 to April 1945.....	109
Civilian labor force, May 1945.....	179
<b><i>Labor conditions in Latin America</i></b> .....	52, 72, 91, 112, 116, 119, 136
<b><i>Recent publications of labor interest</i></b> .....	181



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## *This Issue in Brief*

### *Site employment in postwar new construction*

Site employment on the new construction estimated by the Bureau of Labor Statistics for the first 5 years following the defeat of Japan is expected to average about 1,840,000 workers during the first year and to increase to about 2,840,000 during the fifth year. This estimate (which excludes employment of construction workers in maintenance and minor repairs, and in nonconstruction operations) is based on an average work-year of 1,400 hours, and on expected increases in productivity because of continued changes in construction methods. About half of the jobs will be for skilled workers and foremen, more than a tenth for semi-skilled workers, and almost three-eighths for unskilled workers. Page 1.

### *Wages in lumber industry in Far West*

Workers in the basic lumber industry in the Far West were earning an average wage of \$1.19 per hour in August 1944. In the four branches of the industry the hourly averages were as follows: Logging camps, \$1.38; sawmills, \$1.05; shingle mills, \$1.45; and plywood mills, \$1.03. Page 14.

### *Employment resulting from United States exports, 1939*

Some 960,000 persons were employed in nonagricultural industries in the direct or indirect production of goods for export in 1939. They constituted about 3.2 percent of the total nonagricultural employees in the United States at that time. On the basis of expected postwar increases in labor productivity, the production of the same volume of exports would require only 800,000 persons by 1950. Page 37.

### *Downgrading agreement in aircraft industry*

Six aircraft-manufacturing companies and their employees recently arrived at a voluntary agreement—approved by the National War Labor Board—specifying conditions and terms for downgrading of jobs. The agreement covers some 200,000 employees and includes nonunion workers as well as those who are members of the aircraft workers' unions. Downgrading will take place only in the event of (1) changes in production schedules and methods causing changes in job content, (2) correction of present misclassification of work, (3) reassignment at worker's own request, and (4) unsatisfactory performance. Page 51.

### *Canadian plan for maintenance of employment and income*

The Canadian Minister of Reconstruction presented to the Parliament in April a report in which the Canadian Government undertook responsibility for the maintenance of a "high and stable" level of employment in both the transition and postwar periods. Under the plan, private enterprise would play the major role in furnishing the desired employment, but with Government assistance. The key expenditures which the Government hoped to maintain were, in the order of their importance, those for export trade, private investment, consumption, and public investment. Page 56.

### *Belgian social-security acts, 1944-45*

A comprehensive social-insurance system is provided by recent Belgian decrees, whereby the previous protection to wage earners and salaried workers is extended and broadened. Old-age and survivors' pensions and family allowances

are increased by these measures; sickness and invalidity insurance is established on a compulsory basis; temporary unemployment-insurance coverage is prescribed, pending further legislation; and an improved, general system of paid vacations is authorized. Page 67.

### *Fatal injuries in shipyards, 1943 and 1944*

Some 700 workers in private shipyards lost their lives in industrial accidents in 1943 and 1944, and about 173,000 sustained nonfatal injuries. Nearly two-fifths of the fatalities resulted from falls, and almost another fourth were caused by the workers' being struck by materials or equipment. The most hazardous occupation (as measured by fatal accidents) was that of rigger, but following closely in this respect were the occupations of welder and shipwright. Page 75.

### *Labor-management committees in France*

By ordinance, France has provided for the establishment of labor-management committees to consider suggestions for improvements which will increase output and to deal with the management of social-welfare activities. Both industrial and commercial enterprises are to have such committees, provided they employ at least 100 workers. Enterprises in which fewer than 100 workers are employed, ministerial offices, the liberal professions, and certain other occupations may be made subject to coverage by ministerial decree. Page 92.

### *Wages in pottery manufacture in 1944*

In selected occupations for which data were obtained by the Bureau of Labor Statistics, male workers in potteries had straight-time hourly earnings ranging from an average of 67 cents for watchmen to \$1.62 for plastic-mold workers. In the women's occupations, earnings ranged from 52 cents for bisque cleaners to \$1.17 for gilders and liners. Page 105.

### *British Wages Councils Act, 1945*

Great Britain enacted the Wages Councils Act of 1945 for the purpose of insuring minimum wage standards and at the same time giving support to the voluntary principle in fixing terms of employment. The previously existing trade boards become wages councils, and like other councils to be formed under the legislation may fix guaranteed wages. Disastrous declines in wages are to be avoided under the terms of the legislation by the requirement that, until the close of 1950, employers shall observe terms and conditions of employment not less favorable than the "recognized terms and conditions" in the same industry in the district. Page 120.

### *Labor turnover in munitions and nonmunitions industries, 1943 and 1944*

The quit rate in munitions industries in 1943 and 1944 was slightly over two-thirds of that in nonmunitions industries—44 as compared with 63 per 1,000. An analysis by the Bureau of Labor Statistics indicates that in other respects the trends in separations and accessions were similar in these branches of industry. Page 143.

## CURRENT LABOR STATISTICS

V

Current Statistics of Labor Interest in Selected Periods <sup>1</sup>

[Available in reprint form]

Item	Unit or base period	1945			1944	1939: average for year
		May	April	March	May	
<i>Employment and unemployment</i>						
Civilian labor force (BC): Total	Thousands	52,030	51,930	51,660	52,840	<sup>2</sup> 54,230
Male	do	33,790	33,840	33,720	34,910	<sup>2</sup> 40,950
Female	do	18,240	18,090	17,940	17,930	<sup>2</sup> 13,280
Employed <sup>3</sup>	do	51,300	51,160	50,830	51,960	<sup>2</sup> 46,930
Male	do	33,360	33,410	33,230	34,490	<sup>2</sup> 35,600
Female	do	17,940	17,750	17,600	17,470	<sup>2</sup> 11,330
Nonagricultural	do	43,350	43,410	43,540	43,360	<sup>2</sup> 37,430
Agricultural	do	7,950	7,750	7,290	8,600	<sup>2</sup> 9,500
Unemployed	do	730	770	830	880	<sup>2</sup> 7,300
Civilian employment in nonagricultural establishments: Total <sup>3</sup>	do	37,632	37,797	38,062	38,672	30,353
Manufacturing	do	14,810	15,102	15,368	16,122	10,078
Mining	do	728	761	796	839	845
Construction <sup>4</sup>	do	769	699	636	686	1,753
Transportation and public utilities	do	3,800	3,792	3,788	3,768	2,912
Trade	do	7,023	6,996	7,084	6,962	6,618
Finance, service, and miscellaneous	do	4,496	4,444	4,394	4,363	4,160
Federal, State, and local government, excluding Federal force-account construction	do	6,006	6,003	5,996	5,932	3,988
Military personnel	do	12,200	12,100	12,000	11,200	362
Production-worker employment: <sup>4</sup>						
Manufacturing	do	12,442	12,678	12,940	13,652	8,192
Bituminous-coal mining	do	327	305	334	356	371
Class I steam railroads, including salaried employees (ICC)	do	1,427	1,422	1,423	1,425	988
Hired farm workers (BAE)	do	1,864	1,660	1,520	1,989	<sup>2</sup> 2,645
<i>Hours and earnings</i>						
Average weekly hours:						
Manufacturing	Hours		45.2	45.4	<sup>7</sup> 45.0	37.7
Bituminous-coal mining	do		36.6	43.8	<sup>7</sup> 43.0	27.1
Retail trade	do		39.5	39.3	<sup>7</sup> 40.0	43.0
Building construction (private)	do	40.1	40.0	40.0	40.4	32.4
Average weekly earnings:						
Manufacturing			\$47.16	\$47.43	<sup>7</sup> \$45.55	\$23.86
Bituminous-coal mining			\$43.44	\$52.26	<sup>7</sup> \$50.69	\$23.88
Retail trade			\$27.69	\$27.21	<sup>7</sup> \$26.06	\$21.17
Building construction (private)		\$52.88	\$54.42	\$54.49	\$52.95	\$30.24
Average hourly earnings:						
Manufacturing			\$1.045	\$1.044	<sup>7</sup> \$1.013	\$0.633
Bituminous-coal mining			\$1.183	\$1.197	<sup>7</sup> \$1.182	\$0.886
Retail trade			\$0.769	\$0.759	<sup>7</sup> \$0.715	\$0.536
Building construction (private)		\$1.320	\$1.361	\$1.363	\$1.310	\$0.933
Average straight-time hourly earnings in manufacturing, using—						
Current employment by industry			\$0.971	\$0.969	\$0.942	\$0.622
Employment by industry as of January 1939			\$0.899	\$0.896	\$0.862	\$0.622
Quarterly farm wage rate, per day without board (BAE)			\$4.12		<sup>7</sup> \$3.58	<sup>7</sup> \$1.53
<i>Industrial injuries and labor turnover</i>						
Industrial injuries in manufacturing, per million man-hours worked				<sup>8</sup> 17.3	<sup>8</sup> 18.7	15.4
Labor turnover per 100 employees in manufacturing:						
Total separations			6.6	6.8	<sup>7</sup> 6.8	( <sup>9</sup> )
Quits			4.8	5.0	<sup>7</sup> 4.9	( <sup>9</sup> )
Lay-offs			0.8	0.7	<sup>7</sup> 0.6	( <sup>9</sup> )
Total accessions			4.6	4.9	<sup>7</sup> 5.5	( <sup>9</sup> )
<i>Strikes and lockouts</i>						
Strikes and lockouts beginning in month:						
Number		425	450	400	589	218
Number of workers involved	Thousands	310	285	210	319	98
All strikes and lockouts during month:						
Number of man-days idle	do	2,025	1,330	860	1,443	1,484
Man-days idle as percent of available working time		0.26	0.18	0.11	0.18	0.28

See footnotes at end of table.

Current Statistics of Labor Interest in Selected Periods <sup>1</sup>—Continued

Item	Unit or base period	1945			1944	1939: average for year
		May	April	March	May	
<i>Cost of living and prices</i>						
Cost-of-living index (wage earners in large cities): All items <sup>10</sup>	1935-39=100	128.0	127.1	126.8	125.1	99.
Food	1935-39=100	138.8	136.6	135.9	135.5	95.2
Clothing	1935-39=100	144.4	144.0	143.7	137.4	100.5
Rent	1935-39=100			108.3	108.1	104.3
Fuel, electricity, and ice	1935-39=100	110.0	109.8	110.0	109.8	99.0
Housefurnishings	1935-39=100	144.9	144.7	144.5	135.0	101.3
Miscellaneous	1935-39=100	123.8	123.7	123.6	121.3	100.7
Retail food price index (large cities): All foods	1935-39=100	138.8	136.6	135.9	135.5	95.2
Cereals and bakery products	1935-39=100	109.0	108.9	108.7	108.1	94.5
Meats	1935-39=100	131.7	130.8	130.8	130.3	96.6
Dairy products	1935-39=100	133.5	133.5	133.5	133.5	95.9
Eggs	1935-39=100	140.7	139.9	140.7	127.1	91.0
Fruits and vegetables	1935-39=100	182.5	173.3	169.5	172.8	94.5
Beverages	1935-39=100	124.6	124.6	124.5	124.4	95.5
Fats and oils	1935-39=100	123.9	123.8	123.7	123.3	87.7
Sugar and sweets	1935-39=100	126.5	126.4	126.5	126.5	100.6
Wholesale price index: All commodities	1926=100	106.0	105.7	105.3	104.0	77.1
All commodities other than farm products	1926=100	100.6	100.5	100.4	99.7	79.5
All commodities other than farm products and foods	1926=100	99.4	99.3	99.2	98.5	81.3
Farm products	1926=100	129.9	129.0	127.2	122.9	65.3
Foods	1926=100	107.0	105.8	104.6	105.0	70.4
<i>National income and expenditures</i>						
National income payments (BFDC)	Millions	\$12,856	\$13,194	\$13,686	\$12,387	<sup>6</sup> \$5,520
Consumer expenditures for goods and services (BFDC)	do			<sup>8</sup> \$24,380	<sup>8</sup> \$22,440	<sup>8</sup> \$14,256
Retail sales	do	\$5,890	\$5,464	\$6,347	\$5,856	<sup>6</sup> \$3,634
<i>Production</i>						
Industrial production index, unadjusted (FR): Total	1935-39=100	227	229	232	236	109
Manufacturing	1935-39=100	242	245	249	252	109
Minerals	1935-39=100	141	140	136	146	106
Bituminous coal (BM)	Thousands of short tons	50,030	43,350	52,170	53,930	32,905
Carloadings index, unadjusted (FR)	1935-39=100	142	139	136	140	101
Electric energy (FPC): Total	Millions of kw.-hrs.	23,667	22,823	23,930	23,211	( <sup>9</sup> )
Utilities (production for public use)	do	19,372	18,640	19,526	18,873	10,145
Industrial establishments	do	4,295	4,183	4,404	4,338	( <sup>9</sup> )
<i>Construction</i>						
Construction expenditures	Millions	\$467	\$423	\$392	\$391	\$527
Value of urban building construction started	do	\$133	\$119	\$114	\$107	( <sup>9</sup> )
New nonfarm family-dwelling units		19,100	17,500	13,100	16,500	53,300

<sup>1</sup> Source: Bureau of Labor Statistics unless otherwise indicated. Abbreviations used: BC (Bureau of the Census); ICC (Interstate Commerce Commission); BAE (Bureau of Agricultural Economics); BFDC (Bureau of Foreign and Domestic Commerce); FR (Federal Reserve); BM (Bureau of Mines); FPC (Federal Power Commission. Most of the current figures are preliminary.

<sup>2</sup> 10-month average—March to December 1940.

<sup>3</sup> Excludes employees on public emergency work, these being included in unemployed civilian labor force. Civilian employment in nonagricultural establishments differs from employment in civilian labor force, mainly because of exclusion of such groups as self-employed and domestic and casual workers.

<sup>4</sup> Includes workers employed by construction contractors and Federal force-account workers (nonmaintenance construction workers employed directly by the Federal Government). Other force-account non-maintenance construction employment is included under manufacturing and the other groups.

<sup>5</sup> Reports in manufacturing and mining now relate to "production workers" instead of "wage earners" but with no appreciable effect on the employment estimates.

<sup>6</sup> May.

<sup>7</sup> April.

<sup>8</sup> First quarter.

<sup>9</sup> Not available.

<sup>10</sup> For the coverage of this index, see p. 125.

# MONTHLY LABOR REVIEW

JULY 1945

## Site Employment in Postwar New Construction<sup>1</sup>

### *Summary*

EXECUTION of the postwar new-construction program will mean employment for an estimated average of 1,840,000 site workers during the first year following the end of the war, and for an estimated average of approximately 2,840,000 during the fourth and fifth years. These figures represent the estimated full-time jobs to be available, and not the total number of different people receiving employment; because of turnover in the labor force, including temporary entrance into it on the part of some, the latter figures would be perceptibly higher. During the first year the number of jobs will increase within the pattern of seasonal variation, so that employment early in the year will be below the estimated average, while during the latter part of the year it will be higher. By the fourth and fifth years employment will have reached virtual stability.

Slightly over half of these workers will be skilled, including foremen; the semiskilled group will be somewhat over 10 percent of the total; and the unskilled group will be almost three-eighths of the total. The remainder—about 2 percent—will consist of general and other superintendents, job clerks, and others doing administrative work.

Laborers will constitute the largest occupational group. Among the skilled workers, the most numerous will be carpenters, who will constitute about 45 percent of this group. The other occupations expected to make up 5 percent or more of the skilled group are masons, equipment operators, painters, and plumbers. Almost half of the semiskilled workers will be truck drivers, and about a sixth will be in the closely related occupations of bricklayers' and plasterers' helpers (hod carriers).

The estimated figures take account of expected changes in materials and methods affecting productivity, and are below estimates made on the basis of man-hour requirements in 1940 by about 2½ percent in the first year and by almost 9 percent in the third and subsequent years. These adjustments are based on observation of recent developments in the construction industry, and are necessarily approximate. These, and the estimate as a whole, are regarded as substantially accurate, but are subject to revision on the basis of additional data and after more detailed study.

This report is an estimate of the site employment necessary to perform the new construction<sup>2</sup> previously estimated for the first 5

<sup>1</sup> Prepared in the Bureau's Division of Construction and Public Employment by Alexander C. Findlay.

<sup>2</sup> The employment estimated is for new construction including additions, alterations, modernization, and major repairs of the type for which building permits are usually issued, but excluding maintenance and minor repairs.

years following defeat of Japan.<sup>3</sup> It is valid only as related to that forecast and cannot be regarded as an estimate of the site employment resulting from any other volume of construction work which may be carried out. The forecast of construction work to be started assumed that authorization of publicly financed projects would be governed by immediate need for the completed facilities, without consideration for the resulting employment. Should this assumption not be met, the volume of employment would be changed substantially. Total site employment in new construction would be reduced by as much as 15 percent by a policy of drastic retrenchment in public expenditures, with postponement of all except the most urgently needed construction projects. Conversely, total site employment might be increased from the estimated figures by 25 percent or even more, if creation of employment were a major consideration in decisions on public expenditures for construction activity.

### *Scope and Method of the Study*

The estimates here given are based on past studies relating construction volume to man-hours of site employment for the major types of projects, similar studies of the distribution of man-hours by occupations, and observation of recent trends in methods, machinery and materials which are expected to affect the number of site hours per unit of output in several important types of construction. Briefly, the estimate is derived as follows: The dollar volume of each major type of construction is first converted to man-hours, on the basis of former studies above mentioned; these are adjusted, where appropriate, for the lag between the start and the execution of work, to give timing of the employment represented; the adjusted man-hours are then converted to man-years (i. e., to the number of full-time jobs available); these man-years are distributed among the major construction occupations, to show the employment which would be available in each under 1940 conditions (used in the forecast of volume and the other studies on which this estimate is based); and finally this employment is adjusted downward to allow for the increased productivity which is expected to affect several important types of construction work.

These estimates cover only site employment in new construction, and not the total employment of construction workers. There will be additional employment, not included in the estimate, for more than a million workers in maintenance and minor repairs carried out on existing structures. This includes a wide range of work performed to overcome deterioration—painting and decorating, roof repairs, replacement of leaking pipes and rain gutters, patching of holes or breaks in highway pavement, etc. This employment will be supplied by contractors who undertake such work, by industrial and commercial establishments and public bodies employing regular maintenance crews, and by property owners who employ workers on an hourly or jobbing basis for these services. In addition, some construction workers will be employed in their own trades at nonconstruction work in manufacturing (such as wiring or sheet-metal work for specially designed machines), and an unknown but probably rather small part of the construction labor force will be employed in nonconstruction occupations during the less active parts of the year.

<sup>3</sup>See Probable Volume of Postwar Construction, in *Monthly Labor Review*, February, March, and April 1945. (Reprinted together with this article as Bulletin No. 825.)

### *Relation of Construction Employment to Construction Volume*

Site employment in construction is directly related to the volume of operations currently in progress, and is not in any sense an independent entity. Unlike manufacturing operations, construction offers no "cushion" of production for inventory or expected future orders.<sup>4</sup> Contractors hire mechanics, helpers, and laborers to perform work on specific construction projects, and have no effective use for their services in any other manner.

Employment at the site of construction can be estimated for the actual or expected construction volume during any period, on the basis of the value of work completed per man-hour. For any particular type of construction, there is a good deal of uniformity in the physical measure of work completed per man-hour between groups of projects, even though individual projects may vary from the average because of unique conditions. The value of a completed construction job is made up of the wage cost, the cost of the materials used, numerous overhead items, and profit. Since the physical measure under any given set of general conditions is uniform for a group of projects, the value is uniform also, subject of course to geographical differences in wage rates and material prices, and over a period of time subject to changes in price levels for these and other elements in the total value.

Table 1 shows estimates of the volume of new construction, by the principal major types, to be started during the final year of war against Japan only and during each of the first 5 years thereafter. The value figures in this table are based on 1940 construction costs, assuming the methods and working conditions as well as the material prices and wage rates of that year. It should be noted that the forecast refers to work started rather than work performed during each of the years shown.

TABLE 1.—*Estimated Value of New Construction To Be Started During Final War Year and First 5 Years Thereafter*<sup>1</sup>

Type of construction and source of funds	Value (in millions of dollars)						
	Final war year <sup>2</sup>	First 5 postwar years					
		First	Second	Third	Fourth	Fifth	Average
Total new construction <sup>3</sup> .....	4,460	7,890	10,870	11,805	11,990	12,065	10,924
Private construction.....	3,045	5,765	8,015	8,560	8,545	8,595	7,896
Residential (nonfarm).....	1,250	2,850	3,900	4,250	4,300	4,450	3,950
New construction.....	1,000	2,300	3,100	3,400	3,500	3,700	3,200
Additions, alterations, modernization, and major repairs.....	250	550	800	850	800	750	750
Nonresidential.....	780	1,530	2,400	2,550	2,550	2,450	2,296
Commercial.....	275	750	1,300	1,350	1,350	1,250	1,200
New construction.....	150	250	400	500	550	550	450
Additions, alterations, modernization, and major repairs.....	125	500	900	850	800	700	750
Industrial.....	375	500	700	750	750	750	690
New construction.....	175	300	400	450	500	550	440
Additions, alterations, modernization, and major repairs.....	200	200	300	300	250	200	250
Religious.....	50	100	150	175	175	175	155
Educational.....	25	60	75	80	80	80	75
Social and recreational.....	15	50	75	85	85	85	76
Hospital and institutional.....	30	50	75	85	85	85	76
Miscellaneous.....	10	20	25	25	25	25	24

See footnotes at end of table.

<sup>4</sup> Promotional building seems to be an exception, but the difference is more apparent than real; from the standpoint under consideration, a project for a given number of houses for which land has been purchased and financing arranged is altogether comparable to a contract for other construction.

TABLE 1.—*Estimated Value of New Construction To Be Started During Final War Year and First 5 Years Thereafter*<sup>1</sup>—Continued

Type of construction and source of funds	Value (in millions of dollars)						
	Final war year <sup>2</sup>	First 5 postwar years					Average
		First	Second	Third	Fourth	Fifth	
Private construction—Continued.							
Farm (residential and nonresidential).....	325	425	525	550	550	500	510
Utility <sup>4</sup> .....	690	960	1,190	1,210	1,145	1,195	1,140
Railroad.....	300	350	400	350	350	350	360
Local transit.....	15	25	40	45	45	45	40
Pipe line.....	25	25	25	25	25	25	25
Electric light and power.....	150	250	300	300	300	350	300
Gas.....	50	60	75	90	75	75	75
Telephone and telegraph.....	150	250	350	400	350	350	340
Public construction.....	1,415	2,125	2,855	3,245	3,445	3,470	3,028
Highway, road, and street <sup>5</sup> .....	500	900	1,200	1,400	1,500	1,500	1,300
Residential building.....	10	95	145	175	190	190	159
Nonresidential building.....	420	380	580	690	725	750	625
Educational.....	100	250	400	450	450	450	400
Hospital and institutional.....	35	45	70	80	90	90	75
Public administration.....	50	75	100	150	175	200	140
Commercial and industrial.....	225	0	0	0	0	0	0
Miscellaneous.....	10	10	10	10	10	10	10
Military and naval.....	200	100	75	50	40	40	61
Civil aviation.....	0	60	75	80	80	80	75
Reclamation, conservation, and development.....	100	275	325	350	400	400	350
Water supply.....	75	110	140	160	170	170	150
Sewage disposal.....	75	125	200	225	225	225	200
Social and recreational <sup>6</sup> .....	15	50	75	75	75	75	70
All other Federal.....	5	10	15	15	15	15	14
Miscellaneous non-Federal.....	15	20	25	25	25	25	24

<sup>1</sup> Converted to 1940 cost levels.<sup>2</sup> Between defeat of Germany and defeat of Japan.<sup>3</sup> Additions, alterations, modernization, and major repairs of the type for which building permits are usually issued are included with new construction except where listed separately.<sup>4</sup> Includes municipal and other publicly owned utilities except those constructed in conjunction with reclamation, conservation, and development program.<sup>5</sup> Includes culverts, bridges, grade separations and other related work.<sup>6</sup> Includes buildings and nonbuilding construction.

The value of work to be started as shown in table 1 was converted into man-hours requirements. After conversion, the detailed classification of projects used in table 1 was condensed into the 10 major categories shown in table 2. The estimated man-hours requirements were derived from the value figures by the use of data on the value of work put in place per man-hour, under 1940 conditions, for each major type of construction. These data were developed by the Bureau in its program of analyzing the labor and material consumption in the major types of construction projects.

TABLE 2.—*Site Man-Hours Required for Execution of Predicted Construction Started Within Each Year, <sup>1</sup> under 1940 Conditions*

Type of work and source of funds	Site employment (in millions of man-hours)					
	Final war year	First 5 postwar years				
		First	Second	Third	Fourth	Fifth
Total new construction.....	1,548	2,862	3,964	4,303	4,356	4,362
Private.....	1,106	2,123	2,970	3,172	3,154	3,152
Residential building.....	475	1,080	1,485	1,615	1,625	1,670
Nonresidential building.....	301	596	944	996	988	940
Farm.....	98	128	158	165	165	150
Utility.....	232	319	383	396	376	392
Public.....	442	739	994	1,131	1,202	1,210
Residential building.....	3	32	49	59	64	64
Nonresidential building.....	134	129	198	235	246	254
Highway, road and street <sup>2</sup> .....	150	338	450	525	563	563
Civil aviation <sup>3</sup> .....	0	18	23	24	24	24
Sewer and water.....	45	71	103	117	120	120
All other public.....	110	151	171	171	185	185

<sup>1</sup> Man-hours required for execution of work started within each of the years shown, before adjustment for carry-over of work from year to year.<sup>2</sup> Includes culverts, bridges, grade separations and other related work.<sup>3</sup> Includes structures.

An indication of the individual characteristics of specific types of construction may be obtained from comparison of the figures for farm construction in tables 1 and 2. Man-hours are somewhat low in proportion to the value of work to be started, despite low wage rates for rural workers and extensive use of lower-priced materials. The reason is that commonly a considerable part of the work is done by the farmers, family members, and farm employees, who help the workmen hired to perform the more skilled operations. It is only the work of this last group, and that of construction laborers hired as such, which can be regarded as construction employment.

### Timing of Employment

The man-hours shown in table 2 are those estimated as necessary to construct the projects started within each of the several years. These figures are not the same as man-hour employment during those years. A certain part of the work started during any 12-month period is completed during the following period. The proportion thus carried over depends on the type of construction and the time of year at which the successive 12-month periods start.

If the volume of work started were uniform from year to year, no adjustment would be necessary, because the unfinished work at the end of the period would be equal to the previous year's unfinished work which was completed during the early part of the period. This condition is not present, however; the estimated volume of construction increases rapidly until the third year following defeat of Japan. During this period the rate at which projects are started is increasing continuously, subject to seasonal variations, and the amount of unfinished work at the end of any 12-month period exceeds the amount carried over from the preceding period. Since actual employment results from the execution rather than merely the start of work, the man-hours of employment during each of the postwar years must be adjusted for this lag. The adjusted employment figures, showing employment in man-hours actually available in each year, are presented in table 3.

TABLE 3.—*Man-Hours of Site Employment Available in Each Year<sup>1</sup> During Execution of Predicted Program, under 1940 Conditions*

Type of work and source of funds	Site employment (in millions of man-hours) in first 5 postwar years				
	First	Second	Third	Fourth	Fifth
Total new construction.....	2,644	3,762	4,249	4,352	4,363
Private.....	1,915	2,791	3,130	3,156	3,155
Residential building.....	959	1,404	1,589	1,623	1,661
Nonresidential building.....	523	857	983	990	952
Farm.....	123	153	164	165	152
Utility.....	310	377	394	378	390
Public.....	729	971	1,119	1,196	1,208
Residential building.....	26	46	57	63	64
Nonresidential building.....	131	181	225	243	252
Highway, road and street <sup>2</sup> .....	338	450	525	563	563
Civil aviation <sup>3</sup> .....	18	23	24	24	24
Sewer and water.....	71	103	117	120	120
All other public.....	145	168	171	183	185

<sup>1</sup> Man-hours of employment provided during each of the years shown.

<sup>2</sup> Includes culverts, bridges, grade separations, and related work.

<sup>3</sup> Includes structures.

The amount of work to be performed, or of employment to be available, during the first postwar year is estimated under 1940 conditions at somewhat over 2.6 billion man-hours, or about 60 percent of the amount estimated for the fifth year. The greatest increment in construction activity during the postwar period occurs between the first and second years. As stability is approached, the rate of increase falls sharply. From the third to the fourth years construction man-hours increase by only about 3 percent, and from the fourth to the fifth years by less than 1 percent.

The distribution of construction over the first 5 postwar years for individual types of work differs from the general pattern in some respects. The principal feature to be noted is a reduction in the fifth year for man-hours in private nonresidential construction, the result of an expected reduction in modernization and alteration of commercial and industrial buildings.

### *Man-Years of Employment Under 1940 Conditions*

There is less concrete information regarding the hours worked annually in construction than in most major fields of employment. A full week ordinarily consists of 40 hours,<sup>5</sup> and a year might be regarded as consisting of 50 or 52 weeks. These figures omit consideration of the seasonal variation in the volume of construction work with resulting high seasonal unemployment, and of the time lost during the most active working season because of rain and other interruptions. Hence conversion of man-hours to man-years on the basis of 2,000 or 2,080 hours would give a theoretical figure for a year of full employment, but would understate the number of workers to be employed and overstate the average hours of paid employment.

The working season varies geographically with the climate and local custom, and in many localities is affected by the type of work being done. Some materials are damaged seriously by freezing, which may occur several days after they have been placed and, hence, whenever there is danger of freezing, can be used only under conditions permitting adequate protection without undue expense. Certain operations are entirely feasible in unfavorable weather, but only at greatly increased cost, and are therefore avoided whenever possible. Some types of indoor work, such as "roughing-in" of plumbing and electrical installations, are comparatively unaffected by weather but are nevertheless subject to seasonal reduction because of seasonal variations in the structural work on which they are performed. Although certain numbers of construction workers are employed continuously throughout the year, the available data indicate that these constitute a small proportion of the total. For many workers, especially the employees of the smaller special-trade contractors, it is believed that employment is divided between construction work proper and maintenance and repair work.

Hours worked per week are reduced by bad weather conditions, especially by rain. Some kinds of work can be resumed as soon as the rain stops, but others (such as outdoor painting) must be postponed until the exposed surfaces have dried. In addition, there are interruptions caused by variations in the work to be done, failure to obtain materials as needed, and miscellaneous causes. In these cases,

<sup>5</sup> Shorter workweeks have been established in a few trades, in some cases nationally and in some cases locally. The commonest of these is 35 hours.

the workers involved are ordinarily laid off for a half day or whatever brief time may be involved, without pay for this time lost. Custom in this respect varies, particularly with current employment conditions, but when the lay-offs are quite brief workers usually accept them rather than undertake the trouble of moving their tools to another job.

In addition, workers lose time moving between jobs. The different operations of an individual construction firm in most cases vary in magnitude and its total activities extend over a considerable area. Usually, a nucleus of "regular" workers is retained and transferred from project to project, and is supplemented by a relatively large number hired on a project basis. These latter are hired for the duration of their own work, and not of the project as a whole. In extreme cases (such as extra laborers for placing concrete) they may be hired for only a few hours, and then either rehired or replaced at a later date when similar work is again to be performed. Hence it is necessary for many construction workers to find new jobs at rather frequent intervals, even during periods of above-normal activity. Even when there is a scarcity of workers, this commonly means a short period of lost time for some of those affected.

In view of these conditions, 1,400 hours has been assumed as constituting a man-year of employment. This is equivalent to 40 weeks of 35 hours each. It is not regarded as an ideal work-year, but rather as a fairly realistic figure in view of the seasonal and other influences which have been effective to date.

An estimate of the full-time jobs to be filled, under 1940 conditions, is presented in table 4. It indicates an ultimate working force of about 3.1 million, almost attained in the third year and then fairly constant for the remainder of the period. As is also apparent in table 4, changes from year to year in the proportion of the workers to be employed on the publicly financed projects are relatively slight. This element of construction employment would of course be changed drastically should policy decisions regarding the public-construction program differ in major respects from those assumed in forecasting the volume of work to be started. These jobs are full time, in the sense

TABLE 4.—*Man-Years of Site Employment Provided During Execution of Predicted Program, by Year, under 1940 Conditions*

Type of work and source of funds	Site employment (in thousands of man-years of 1,400 man-hours) in specified postwar years				
	First	Second	Third	Fourth	Fifth
Total new construction.....	1,887	2,686	3,035	3,108	3,117
Private.....	1,367	1,993	2,236	2,254	2,254
Residential building.....	685	1,003	1,135	1,159	1,186
Nonresidential building.....	373	612	702	707	680
Farm.....	88	109	117	118	109
Utility.....	221	269	282	270	279
Public.....	520	693	799	854	863
Residential building.....	19	33	41	45	46
Nonresidential building.....	93	129	161	174	180
Highway, road and street <sup>1</sup> .....	241	321	375	402	402
Civil aviation <sup>2</sup> .....	13	16	17	17	17
Sewer and water.....	51	74	83	86	86
All other public.....	103	120	122	130	132

<sup>1</sup> Includes culverts, bridges, grade separations, and related work.

<sup>2</sup> Includes structures.

that those who hold them are full-time members of the construction labor force,<sup>6</sup> but not in the sense that all of these persons are employed continuously throughout the year or even throughout the construction season. The presence of so-called "frictional" unemployment between successive construction projects has already been mentioned. This will affect some workers slightly or not at all, but others to a considerable degree. At any given time, some part of the workers shown will be temporarily out of work, having been laid off at one project and not yet hired at another. This will of course be greatest during the dull construction season, which in general is the winter months. Adjustment for this situation has already been made by the use of an average figure of 1,400 hours as a year's employment.

### *Employment by Occupation*

Occupational specialization is an outstanding feature of the construction industry. In part this is caused by the wide range of operations to be performed and of materials to be processed, and to a considerable degree it is the result of local customs, preferences, and other conditions. This separation of functions is most extensive in the larger urban places and in large projects, and is least pronounced in farm construction. For rural work, the local carpenters ordinarily do lathing and not infrequently install ready-made sheet-metal items and even electric wiring, while the local masons often do plastering as well. When the volume of work is sufficient to afford a living to workers in the less-common trades, the greater proficiency permitted by specialization has caused its general adoption.

The occupational pattern differs greatly with the type of work. For all types, laborers are the largest single group; for building construction, carpenters are the largest single group of skilled workers. In fire-resistive construction carpenters constitute one of the largest occupational groups, even though wood is used only incidentally in the basic structure, because they are needed for building the concrete forms and for installing the interior woodwork and hardware. Even in highway projects carpenters are quite commonly needed, to build forms for bridges and culverts being constructed in conjunction with the highway work, and for other related operations. Some occupations—such as those of high-tension linemen, blacksmiths, machinists, explosives workers (powder men)—are present on only a few types of work or on unusually large projects.

Table 5 gives an estimate of the employment, by occupation, during the first 5 postwar years, according to the methods and patterns of 1940. The more common occupations are shown, with a few combinations of those closely related. The rather uncommon trades, such as those mentioned above and a considerable number of other occupations which are fairly widespread but individually small (marble setters and helpers, elevator constructors and helpers, etc.), are grouped together under the classifications, "all other skilled," and "all other semiskilled." No attempt has been made to estimate employment in the specialties within standard crafts (such as hardwood-floor laying, stair building, etc., under carpentry), the skills of which are usually transferable to other operations.

<sup>6</sup> Persons following other gainful occupations during dull seasons are ignored in this statement.

TABLE 5.—*Estimated Site Employment, by Occupation and Year, During Execution of Predicted Program, by 1940 Pattern of Operations and Productivity*

Occupation	Site employment (in thousands of workers) in specified occupations in postwar years				
	First	Second	Third	Fourth	Fifth
Total.....	1,887.0	2,686.0	3,035.0	3,108.0	3,117.0
Superintendents.....	23.0	32.5	36.5	37.5	37.5
Foremen.....	139.0	197.0	222.0	227.0	229.0
Clerks.....	16.0	23.0	26.0	27.0	27.0
Skilled workers.....	805.0	1,164.5	1,317.5	1,346.5	1,348.5
Bricklayers, masons.....	68.5	101.5	116.0	119.5	119.5
Carpenters.....	370.0	535.5	604.5	617.0	617.0
Electricians.....	34.5	50.5	57.0	58.0	58.0
Equipment operators.....	53.5	73.0	82.5	85.0	85.0
Lathers.....	10.5	16.5	19.0	19.5	19.5
Painters.....	76.0	111.0	126.0	129.0	129.5
Plasterers.....	37.0	55.0	62.5	64.0	64.0
Plumbers.....	46.5	68.5	78.0	79.5	80.5
Sheet-metal workers.....	13.0	19.0	22.0	22.5	22.5
Steamfitters.....	8.5	13.0	15.0	15.5	15.5
Structural, reinforcing, and ornamental iron-workers.....	26.5	38.0	43.5	44.5	44.0
All other skilled workers.....	60.5	83.0	91.5	92.5	93.5
Semiskilled workers.....	213.0	293.0	332.0	343.0	344.0
Bricklayers', plasterer's helpers.....	30.5	46.0	53.0	54.5	54.5
Electricians' helpers.....	9.5	14.0	16.0	16.5	16.5
Plumbers' helpers.....	19.0	28.5	32.5	33.5	33.5
Sheet-metal workers' helpers.....	3.0	4.5	5.5	5.5	5.5
Truck drivers.....	98.5	128.5	145.0	151.0	152.0
All other semiskilled workers.....	52.5	71.5	80.0	82.0	82.0
Unskilled workers.....	691.0	976.0	1,101.0	1,127.0	1,131.0
Laborers.....	668.5	944.0	1,064.5	1,089.5	1,093.5
Watchmen, miscellaneous.....	22.5	32.0	36.5	37.5	37.5

As is evident from table 5, skilled workers exclusive of foremen constitute three-sevenths of the total for all construction work, with only slight variation throughout the period. For private construction they make up very nearly half, while for public construction they are not greatly above a quarter of the total. This major difference arises from the fact that the predominant part of the private program will consist of buildings, which require the highest percentage of skilled workers, whereas the public program consists mainly of nonbuilding work and includes some large elements in which the percentage of skilled workers required is notably low.

Among the skilled trades the carpenters constitute the largest occupation, accounting for somewhat less than half of the skilled group. Painters are the next commonest trade, and about 90 percent of them will be employed on private work. Even for similar types of construction, such as multifamily residential buildings, there is proportionately more work for painters on the privately financed jobs, because of more extensive decorative treatment. In contrast, bricklayers will constitute about 8 percent of the skilled workers in the private program, but 13 to 14 percent in the public program, because the publicly financed buildings will be predominantly of masonry and in many cases will have partitions of structural tile or other materials installed by bricklayers. Equipment operators show an even greater contrast, accounting for 6 percent of the employees in the private program and 21 percent on public construction. This is caused primarily by differences in the types of construction; those types most extensively mechanized, of which grading and paving are

the commonest examples, are undertaken almost exclusively by public bodies. The semiskilled group is proportionately about 3 times as numerous on public as on private work, because of the large number of truck drivers employed in the nonbuilding types of construction.

In addition to the direct productive workers, an administrative and supervisory staff of superintendents, foremen, and clerks will be needed, making up somewhat less than 10 percent of total site employment. This group will be slightly larger, proportionately, on the publicly financed part of the total program, principally because of differences in the relative importance of the various types of projects and in the average size of projects. Roughly three-fourths of this group will be foremen, for whom the distribution by craft will approximate that for the workmen. Although most of the superintendents will be employed by general contractors and will have charge of complete projects, superintendents for specific trades will be employed on some of the larger projects. Clerks are employed only on projects of moderate or large size, usually to be responsible for maintaining time, pay-roll, and material records, and other somewhat similar work. In the largest projects a complete job office is established, having authority for many of the functions usually performed at a contractor's central office.

These estimates exclude employees of the contractors' central offices and job representatives of the owners, architects, and engineers.

### *Changes in Occupations and in Productivity*

Changes in occupational patterns and in the work done by those in given occupations are taking place more or less continuously. In a few cases, such developments have led to the establishment of entirely new occupations on the initiation of new operations differing radically from those of established trades. Other changes have either expanded or curtailed the work of existing trades. Thus, metal lath is installed by the lathers who do wood lathing; plumbing was greatly changed through the replacement of lead pipe by steel pipe accompanied by the change from boxed-in fixtures with exposed pipe to "open" plumbing with concealed pipe; plastering has been simplified by a great curtailment in elaborate ornamental work; and carpentry has been changed in pattern by progressive reduction, over almost two generations, in the use of ornamental woodwork and complicated framing, accompanied by a great increase in the building of forms for concrete work during recent years. Some of these changes have meant that a lower level of skill is satisfactory for most work, but many have merely called for changes in the pattern of skills needed in the occupation.

Rather distinct from the changes described above is another group for which there is no exact starting date, but which has been accelerated greatly by the war. This may be termed industrialization, as applied to the construction of standardized structures or of structures which lend themselves to standardization. This development has been noted especially with respect to detached houses, which, however much they may differ in exterior appearance and in the details of ornamentation, when built in a fairly large promotional development usually follow a very few basic designs in floor plan and structure proper.

The wartime program of house construction has been marked by much more careful planning, greater specialization of operations, greater use of processing machinery at the site, and closer correlation between the different parts of the work than had formerly been practiced. Carpenters and workers in some other trades were provided with detailed schedules and dimensions of pieces to be cut. In a few of the largest projects, templates and other auxiliary devices were used, eliminating even the necessity for measuring. After cutting, the pieces were commonly delivered to the erection locations in sets, often marked with code numbers indicating where they were to be used.

This development (commonly known as pre-cutting) marks a basic change, in that it transfers the scheduling of material processing from a production function of foremen and skilled workmen to a management function. It affects employment both by increasing the productivity per worker and by reducing the range of skills necessary for capable performance of important operations. After the war these procedures will probably be used less intensively, because there will be few if any repetitive projects comparable in size to the largest of the wartime housing or barracks projects. At the same time, there is every indication that greater mechanization and rationalization in construction will be practiced than before the war.

Within recent years there has been notable improvement in some types of construction machinery. The pre-cutting development above mentioned was greatly facilitated by a comparatively recent type of machine, the radial saw. Important development has also occurred in some important types of highway machinery, primarily with respect to increased capacity rather than to the type of operations performed, but still increasing the productivity per worker. Other developments have been of less individual importance, but in combination have been appreciable. In addition, older equipment items such as electric handsaws have been coming into increasing use, and from time to time new uses are made of existing equipment.

Another progressive change has been in the almost continuous increase in the extent of off-site processing. Present indications are that this trend will continue and probably be accelerated. It affects building construction more than other types, but extends to the others to some degree.

These are all aspects of the general question of the postwar productivity per worker as compared to that in 1940. It is certain that there will be changes, but no exact measure of their extent is available. The presence of changed methods and practices in recent construction activities of numerous types has been noted, and estimates have been made of their expected effect on the different types of work.

Table 6 presents the estimated employment by occupations after the expected changes in productivity. It is recognized that the estimates for individual trades can be only rough approximations, but they are believed to give at least an indication of the distribution of the total changes. As is apparent from comparison with table 5, the ultimate effect is expected to be a reduction of somewhat less than 9 percent in the number of workers required to carry out a year's program. This is expected to occur progressively over a period of about 3 years, as the various developments progress and receive more general adoption.

The effects will differ among the various types of work, from a maximum in highway and other paving and in private residential building to a minimum (so small that no attempt at adjustment for it has been made) in farm construction. Almost all occupations will be affected to some extent, but with major differences between different types of work. Carpenters will be the group most affected in private residential building, whereas in both residential and non-residential modernization work carpentry methods are not likely to change significantly. In the larger paving and grading projects the number of construction machine operators will be reduced by the larger capacity and greater productivity of the more important machines, whereas in building work little net change in their scope of work seems likely. It is probable that there will also be geographical differences, with the changes in productivity greatest in those localities where the adoption of improved methods has lagged heretofore.

TABLE 6.—*Estimated Site Employment During Execution of Predicted Program, by Expected Pattern of Operations and Productivity*

Occupation	Site employment (in thousands of workers) in specified postwar years				
	First	Second	Third	Fourth	Fifth
Total.....	1,840.0	2,513.0	2,773.0	2,837.0	2,842.0
Superintendents.....	22.0	30.5	34.0	35.0	35.0
Foremen.....	135.0	183.5	201.5	206.0	207.0
Clerks.....	16.0	22.0	24.0	25.0	25.0
Skilled workers.....	789.0	1,090.0	1,203.5	1,229.0	1,229.0
Bricklayers, masons.....	67.0	95.0	107.0	110.0	110.0
Carpenters.....	360.0	501.5	550.0	562.0	560.0
Electricians.....	34.0	47.0	52.0	53.0	53.0
Equipment operators.....	58.5	68.0	75.5	77.5	78.0
Lathers.....	10.5	15.5	17.0	18.0	18.0
Painters.....	74.0	103.5	113.5	116.0	116.5
Plasterers.....	36.0	51.5	57.5	59.0	58.5
Plumbers.....	47.0	63.5	71.0	72.0	72.5
Sheet-metal workers.....	13.0	17.5	19.5	20.0	20.0
Steamfitters.....	8.5	12.5	14.0	14.5	14.5
Structural, reinforcing, and ornamental-iron workers.....	26.0	36.0	40.0	41.0	41.0
All other skilled workers.....	59.5	78.5	86.5	86.0	87.0
Semiskilled workers.....	206.0	273.0	303.0	312.5	313.0
Bricklayers', plasterers' helpers.....	30.0	43.5	49.0	50.5	50.5
Electricians' helpers.....	9.0	13.5	15.0	15.0	15.0
Plumbers' helpers.....	18.5	26.5	30.0	30.5	30.5
Sheet-metal workers' helpers.....	3.0	4.5	5.0	5.0	5.0
Truck drivers.....	94.5	118.0	130.0	135.5	136.5
All other semiskilled workers.....	51.0	67.0	74.0	76.0	75.5
Unskilled workers.....	672.0	914.0	1,007.0	1,029.5	1,033.0
Laborers.....	650.0	883.5	973.5	995.5	998.5
Watchmen, miscellaneous.....	22.0	30.5	33.5	34.0	34.5

The increase in productivity will probably be slightly greater in private construction, because of the very large element of residential building for which an increase of 15 percent is expected. Little increase in productivity is expected for the small operators building a house or two at a time or for the builders of luxury-grade houses. For apartment construction the changes will also be well below those for residential construction as a whole, largely because the procedures applicable to frame houses are inappropriate. An increase of only 5 percent has been estimated for private nonresidential building. A

large part of the private nonresidential building will consist of alteration and modernization work, most of it unsuited by its nature to mass-production techniques. The new projects of a size sufficient to afford opportunity for time savings through careful planning will usually be performed by the contractors who have in the past been the leaders in the planning and coordination of their operations. Although some increase in productivity in farm construction is expected, it is likely to be quite small and has therefore been omitted in the estimate. For utility construction an increase of only 5 percent has been assumed, because this also is a field in which work has been carefully planned in the past and in which individual changes affecting output are likely to be minor.

Increased productivity in public construction is expected to be slightly less than that in private construction. Productivity in public residential building is expected to increase by 10 percent, in contrast to 15 percent in private residential building, because the public work is likely to consist predominantly of apartment-type buildings with masonry walls. At the same time, individual variations between and within structures and the extent of ornamental treatment will be much less in publicly than in privately financed apartments. For nonresidential buildings an increase of 5 percent has been estimated, the same as for privately financed buildings of the same group. The greatest increase, 15 percent, has been estimated for highway, road and street work, primarily because of recent developments in some of the basic machines. The same amount of increase has been assumed for airport work, the greater part of which is quite similar to highway work. No change has been estimated for sewer and water projects, already highly mechanized and standardized in the principal operations, although it is recognized that some small change is rather likely. For the "all other public" classification, consisting largely of heavy engineering work, an increase of 5 percent in productivity has been estimated. This work is usually done by contractors who give the most careful attention to their methods, and will be affected mainly by development of new equipment.

# Wages in the Basic Lumber Industry in the Far West, 1944<sup>1</sup>

## *Summary*

WORKERS in the basic lumber industry in the Far West earned an average of \$1.19 an hour in August 1944. Approximately three-fifths of the workers earned between 90 cents and \$1.20 an hour and nearly a fourth earned between 90 cents and \$1.00 an hour. Only a tenth of the workers received less than 90 cents an hour, while a sixth earned \$1.50 or more.

The highest wages (averaging \$1.45) were paid in shingle mills and the next highest (\$1.38) were paid in logging camps. Workers in sawmills and in plywood mills received much lower wages, their respective earnings per hour being \$1.05 and \$1.03.

Among the individual occupations, the highest earnings were received by saw filers in sawmills and shingle mills and by such incentive workers as fallers and buckers in logging camps, lumber pilers in sawmills, and shingle sawyers and packers in shingle mills. The next highest earnings were generally received by skilled maintenance and processing workers. Helpers on machines were among the lowest-paid workers in the industry.

The trend in wages in the basic lumber industry in the Far West has been sharply upward since 1939, straight-time hourly earnings increasing nearly 55 percent and gross hourly earnings increasing about 61 percent. Most of the increase took place after January 1, 1941. Straight-time earnings have risen about 41 percent since that date and gross earnings nearly 47 percent.

The largest absolute increase in earnings (55 cents) between 1939 and 1944 occurred in logging camps, the next largest (48 cents) in shingle mills, and the smallest (27 cents) occurred in plywood mills. The earnings of incentive workers increased much more than did those of time workers. Within branches of the industry, there was a marked degree of uniformity in absolute increases among occupations, regardless of level of skill, largely because most of the general increases granted since 1939 have been flat "across-the-board" increases.

## *Characteristics of Basic Lumber Industry in Far West*

Forest lands constitute the most important natural resource of the Far West, and in normal times lumber production is the leading industry of the region. A substantial proportion of the population depends directly or indirectly on this industry for a livelihood. It is estimated that approximately 130,000 workers, or somewhat more than one-fourth of the total in the basic lumber industry, are employed in the Far West.

<sup>1</sup> Prepared in the Wage Analysis Branch by Victor S. Baril, assisted by Norbert Prager and John Standish, J. W. C. Harper and L. R. Linsenmayer, regional wage analysts of the Bureau, directed the collection of the data on which this report is based.

The full report on the Nation-wide study of wages in the basic lumber industry in 1944 will be published in a later issue. The most recent previous Nation-wide survey of the lumber industry was made during the winter of 1939-40 (see Monthly Labor Review July 1941: Hourly Earnings in the Lumber and Timber Products Industry).

More than three-fifths of the remaining saw-timber stand in this country is in the Far West; Oregon alone accounts for a fourth, Washington for a sixth, and California for an eighth. Fully seven-eighths of this saw-timber stand is mature old growth and virtually all is composed of soft woods<sup>2</sup>; much of it however, is not commercially available at present.

Since 1927, the Far West has led all other regions in lumber production and in 1943 it accounted for 43 percent of the national output. Oregon alone produced 19 percent of all of the lumber in 1943, while Washington produced 13 percent, California 7 percent, and Idaho and Montana 4 percent.

Lumbering in the Far West is, on the whole, a seasonal operation. Although both logging and sawmilling follow roughly the same seasonal pattern, logging appears to be somewhat less stable than sawmilling. Because of climatic conditions which either impede or prohibit operations, production of logs is generally lowest during the winter months; it also falls off in the summer months when it is often necessary to close logging camps because of fire hazards. The available supply of logs and, particularly, market conditions determine the operation of sawmills. Many sawmills, however, are able to build up log reserves which enable them to operate for a somewhat longer season than do the logging camps. Sawmill production is lowest during the winter months when building activity is at a low level and when many logging operations are closed.

Because of dependence on the building and construction industry which, in normal times, consumes more than half of the lumber produced, the lumber industry has been profoundly affected by the wide fluctuations that have characterized the building and construction industry in the past. Equally serious has been the problem of overcapacity and overproduction. The availability of very great quantities of standing timber, the constant pressure to liquidate these holdings at the first opportunity, and excess sawmill capacity have been responsible for chronic overstocking of the market and intermittent unemployment.

#### LOCATION OF THE INDUSTRY

*Douglas Fir region.*—Although lumber is produced throughout the Far West, the industry has long been centralized in the Douglas Fir region, which includes those areas of Washington and Oregon situated west of the summit of the Cascade Range. Though smaller in area than most lumber-producing regions of the country, the Douglas Fir region is nevertheless more important than most of them, largely as a result of the density of its forest stand and the great size of its trees. About half of the saw-timber stand in the Far West is in this region, which alone produces more than a fourth of the national lumber output. Douglas fir is the principal species in this region, but many other species, such as spruce, hemlock, and cedar, are also found. Within the Douglas Fir region the industry has attained its greatest development around Puget Sound, Grays and Willapa Harbors, and the Columbia River area. With the gradual exhaustion of the saw-timber stands adjacent to the tidewater in western Washington, the industry has shifted to Oregon and in particular to the Willamette Valley.

<sup>2</sup> Forest Statistics—Area, Stand, Growth and Drain (U. S. Department of Agriculture, Forest Service).

*Western Pine region.*—Next in importance is the Western Pine region which covers 11 Western States, with the exception of the Douglas Fir region in western Washington and western Oregon and the Redwood region along the northern coast of California. Most of the western pine lumber is produced, however, in the States of California, Idaho, Montana, Oregon, and Washington. For purposes of the present survey the Western Pine region is limited to these five States. Three principal species are found in this region. Of these, ponderosa pine is by far the most important and is widely distributed over the region. Sugar pine, one of the largest of the western pines, is next in importance and is largely confined to California and Oregon. The third important species is western white pine which is found in northern Idaho and adjacent territory in Montana and Washington.

*Redwood region.*—The Redwood region, by far the smallest of the three lumber-producing regions in the Far West, covers a narrow strip of land along the northern coast of California. Five counties are included, namely Del Norte, Humboldt, Mendocino, Sonoma, and Marin. This region has very large trees and a very dense timber stand. Output is dominated by a few large companies.

It should be borne in mind that although one species predominates in each region, such as fir in the Douglas Fir region and pine in the Western Pine region, these same species are also found to some extent in other regions. For example, fir accounts for a substantial percentage of the lumber output of the Redwood region.

#### ORGANIZATION OF PRODUCTION

Varying degrees of integration are found in the basic lumber industry in the Far West. The variations, however, are largely confined to logging camps and sawmills, as shingle mills and plywood mills are as a rule operated by firms or individuals not connected with lumber manufacture.

In certain sections, particularly in the Douglas Fir region, logging is carried on independently of lumber manufacture, by firms or individuals who either own timber stands or obtain timber from government-owned land. In some areas these operators sell their logs in open market and in others they dispose of them under contract to lumber manufacturers. Some of the sawmills that possess timber stands supply all of their own mill requirements; others are able to supply only part of their needs, obtaining the remainder through purchases in open market or under contract. Many sawmills own no timber, and must buy their logs on the market or on contract either with independent loggers or with integrated operators whose production exceeds their mill requirements.

Much of the logging is done by "gyppo" loggers, i. e., small independent operators who contract to log for a stipulated price per thousand board feet. In some instances only part of the logging operation (such as felling and bucking or hauling) is contracted out, and the owner or principal operator does the yarding, loading, and when not contracted out, the hauling.

Most sawmills in the Douglas Fir and the Redwood regions produce only lumber, which they sell in either rough or finished form. In certain districts of the Western Pine region, however, much of the lumber produced in the sawmill is manufactured into box shooks in box factories operated in conjunction with the mill.

Large sawmills dominate the lumber output in the Far West, whereas in other regions small sawmills account for the bulk of the lumber produced. Of the lumber produced in the Far West in 1943, fully four-fifths came from mills with an annual cut of 10,000,000 board feet or more, two-thirds came from mills with a cut of 25,000,000 or more board feet, and over one-third from mills with a cut of 50,000,000 or more board feet. In Washington, over half of the lumber was produced in mills cutting 50,000,000 or more board feet per year. In the East, on the other hand, less than 15 percent of the lumber produced in 1943 came from mills cutting 10,000,000 or more board feet, whereas more than half was produced in those cutting between 1,000,000 and 10,000,000 board feet and a third was produced in those cutting less than 1,000,000 board feet per year.<sup>3</sup>

#### PRODUCTION TECHNIQUES

Production methods in both logging and sawmilling in the Far West are quite different from those used in other lumber-producing regions of the country. These differences, which exert a profound influence on the occupational structure of these two segments of the industry as well as on the level of wages paid, are due very largely to the density of the timber stand, the large size of the trees, and the rugged topography of the area. In the manufacture of shingles and plywood, however, production techniques in the West are much the same on the whole as those used in other regions.

Aside from the felling and bucking operations which are still very largely performed with hand tools, logging in the Far West is highly mechanized. Large power skidders have long been used in the Douglas Fir region to move logs from the cutting area to the landing or loading point; the logs are transported by railroad from the loading point in the woods to their destination. The skidder method of yarding was well suited to this region because of the great density of the timber stand, the large size of the trees, the rugged terrain, and the prevalence of the practice of "clear-cutting." In recent years, however, the trend has been in the direction of more flexible equipment and, as a result, tractors are replacing power skidders, and transportation by truck is replacing that by railroad. In the Western Pine region, tractors are used almost exclusively in yarding operations, and trucks are generally used to move logs either to the mill or to the railroads. Mechanical loaders are generally used in the Far West, owing to the size of the logs. In operations using power skidders, the mechanical loader is generally a part of the skidder unit. Elsewhere, the power loader is a separate piece of equipment which may be either stationary or mobile.

Logging equipment varies widely as to type and size. Mechanical loaders, for example, vary from crude home-made apparatus powered by small gas engines to large steam- or Diesel-powered loaders. Wide differences are also found in yarding and hauling equipment.

Lumber manufacturing is generally a somewhat more complex process in the Far West than in other regions. As had been pointed out earlier, medium-size and large sawmills account for a very high proportion of the lumber cut in this area. These mills, particularly the large plants, produce a wide variety of items ranging from molding and

<sup>3</sup> Census of Forest Products, 1943 (U. S. Department of Commerce, Bureau of Census).

interior finish to large timbers for heavy construction. The small mills, on the other hand, manufacture few items and do not differ appreciably from the many thousands of small mills operating in other parts of the country.

Sawmills in the Far West may be classified into two broad groups on the basis of the type of head saw used to cut lumber. Large- and medium-size mills generally are equipped with band saws, whereas small mills have circular saws. The larger mills also have resawing equipment to reduce the cants or slabs cut on the head rig to smaller dimensions. The largest mills, for example, may have pony rigs, gang saws and a variety of resaws, whereas the medium-size mills are equipped as a rule only with band or circular resaws. Equally wide variations exist among mills in methods of handling materials both in the mill proper and in the yard.

Finishing facilities are found only in the larger mills. The essential equipment includes sizers, planers, matchers, resaws, and trim saws. Only the larger mills have dry kilns, as most mills air-dry their lumber. Small sawmills dispose of their lumber rough and often without even air-drying it.

Shingle manufacture is carried on in small mills and the process is simple as compared with lumber manufacture. It consists essentially of cutting logs or bolts into blocks, splitting the blocks into quarter sections, cutting the sections on special-purpose saws to produce shingles, packing and drying the shingles, and then loading the bundles onto cars or trucks for shipment.

The making of plywood is entirely different from that of lumber manufacture. The principal operations include the slicing of thin layers (veneer) from logs, the preparation of veneer sheets of the desired size and grade, the assembling of veneer sheets and glue-covered cores into alternate layers which are later pressed to form plywood of the desired thickness, and the preparation of plywood sheets (patching, cutting to size, and sanding) for shipment.

### *The Labor Force*

Lumbering is essentially a man's job. On the whole the work is arduous and hazardous. In many occupations it is highly specialized and the skill requirements are very high. Throughout the war period, the industry has had great difficulty in replacing experienced workers who went into other war industries in the area or were inducted into the armed forces. Inexperienced recruits have been used to fill vacancies in the less-skilled occupations, while vacancies in the more highly skilled occupations have been filled either through upgrading or by combining occupations. For example, separate rigging crews in logging have nearly disappeared, the rigging now being done by the yarding crews; in many camps yarding crews are working short-handed. The employment of women to perform some of the lighter tasks in sawmills and plywood mills has helped to relieve the manpower situation to some extent and has released some men to perform the more arduous work.

#### LOGGING OCCUPATIONS

As was pointed out earlier, there are four basic operations in logging, namely, cutting, yarding, loading, and transportation. The cutting operation is performed by fallers and buckers who, working in pairs and

generally with the aid of hand tools (axe, cross-cut saw, wedge, and hammer), cut down trees, remove limbs and cut the trees into logs of the desired length. Fallers and buckers are highly skilled workers. The work is both hard and dangerous. A third or more of the workers in logging camps are fallers and buckers.

The composition of yarding crews varies, depending on the method of yarding. If tractors are used, the crew generally consists of a tractor driver, a choker setter who secures the cable to one end of the log, and a hooker who attaches the open end of the cable to the tractor. A larger and more diversified crew is found in logging operations using power skidders (high-lead or skidder-slackline). Under normal conditions such a crew consists of the following: A hook tender who is in charge of the yarding and loading operations; an engineer who operates a yarding engine in accordance with signals received from the yarding crew; a head rigging slinger who is second in command in the yarding crew and who selects the logs to be taken out for each load; a second rigging slinger who acts as leadman in the choker-setter crew and who hooks chokers to and unhooks them from the butt-rig; a choker setter who sets the chokers around one end of the log; a chaser who unhooks chokers at the landing and signals to engineer to pull choker from log and return butt-rig to cutting area; and a whistlepunk who relays signals from the yarding crew to the yarding engineer.

The loading crew generally consists of an engineer who operates the loading engine, a head or top loader who selects the logs to make up a load and is responsible for the proper placement of logs on the car or truck, and a second loader who places and releases tongs on logs. Transportation crews vary depending on the type of transport employed. For example, if rail conveyance is used, standard crews (engineers, head brakeman or conductor, and second brakeman or brakeman) are found. Truck drivers constitute the transportation crew if trucks are used; they operate a wide variety of trucks, ranging from light gas-powered trucks to heavy diesel-powered trucks. At times they also help in the loading and unloading. In some areas, water transportation is used, drivers moving the logs downstream either to mills or to points where they are assembled into rafts and towed to their destination.

All logging camps have numerous auxiliary occupations. The larger camps employ bulldozer operators, jackhammer men, powdermen, and road monkeys in the construction or repair of roadways, and maintenance crews which include blacksmiths, saw filers, donkey doctors (skidder-engine repairmen), cat doctors (tractor repairmen), and machinists who maintain and repair logging equipment. Equally important are the cooks who prepare the meals, the bull cooks who perform general chores around the camp, and the flunkies who assist in the camp kitchen.

#### MILL OCCUPATIONS

The occupational structure of a sawmill is even more varied than that of a logging camp and is determined largely by the size and the end product of the mill. Small sawmills are manned by a small crew of men which includes a sawyer in charge of the operation, a carriage operator (when this work is not performed by the sawyer), an off-bearer who removes the slabs from the head rig, possibly a trimmer who cuts boards to length, and one or two lumber handlers who stack the

lumber. The duties of most workers in small mills are not clearly defined, and as a result workers perform a number of different tasks about the mill as needed. Larger mills, however, are departmentalized, each department having its own job structure within which workers regularly perform definite tasks.

The most skilled worker in the head mill is the head sawyer who directs the operation of the head rig, estimates the grade and value of lumber in each log, and signals cutting instructions to the carriage crew. The head sawyer is assisted by a crew which generally consists of a setter and a dogger on the carriage, a deckman who lines the logs up on the deck and otherwise prepares them for cutting, and an off-bearer who removes the cants, flitches, or slabs from the head rig, and guides them onto transfer rolls. Among the other important occupations in the head mill are those of the gang sawyer who operates a large resaw known as a gang saw, the resawyer who operates band and circular resaws to reduce lumber to smaller dimensions, the edgerman who cuts boards to the desired width, the trimmer operator who trims boards to length on either a multiple or gang trimmer or on a single or double trim saw, and the green-lumber grader who judges lumber on the green chain and indicates grade and dimension by means of chalk or crayon. Many workers are also employed as line-up men and off-bearers on the various saws and as lumber pullers on the green chain.

Among the several occupations required in the seasoning or drying of lumber, perhaps the most important are lumber pilers (when lumber is air-dried in the yard) and lumber stackers and unstackers, transfer car operators, and kiln tenders (when lumber is dried in kilns). The piling and stacking of lumber is generally done by hand, although a number of the larger mills use special equipment. The principal and more-skilled occupations in the planing mill are those of sizer, planer and matcher operator, set-up man (when this work is not performed by the operator), resawyer, and finished-lumber grader. As in sawmills, a number of workers act as helpers on the various machines, either lining up or off-bearing, and a number are also engaged in pulling lumber from the chains and stacking it on skids or trucks or in bins. Within planing or finishing mills the occupational structure varies somewhat, depending on the products of the mill. Some mills are equipped only with a sizer or a planer to dress lumber, while others have matchers, molders, and a variety of resaws and trim saws.

The material-handling group of occupations varies considerably among mills owing to wide differences in mill practice. In small mills lumber is handled manually and is moved about the mill and yard by means of buggies; in the larger mills, it is handled by means of carriers, tractors and cranes. Conveyors and transfer rolls are used extensively in the more highly mechanized mills to move lumber from one operation to the other.

Sawmills require the services of a number of highly skilled workers to service and maintain mill equipment. One of the most important and highly skilled occupations in this group is that of saw filer; he checks, sharpens, and conditions mill saws. In large mills the filer is assisted by a helper. Other workers who help to maintain the mill in good running order are blacksmiths, millwrights, electricians, machinists, and carpenters.

Perhaps the simplest occupational structure in the lumber industry is found in shingle mills. The two principal occupations from the standpoint both of skill requirements and number of workers employed are shingle sawyers and shingle packers. The shingle sawyer operates a special saw to cut shingles from quarter sections of cedar blocks and also sorts and trims shingles, while the shingle packer counts out the necessary number of shingles to form a bundle, packs them, and secures them with wood strips and metal bands. Other important occupations in the manufacture of shingles are those of cut-off sawyer who cuts bolts or logs into blocks and the knee bolter and splitter who splits blocks into quarter sections.

A plywood mill consists of two separate units, one engaged in the production of sheet veneer for use in the manufacture of plywood, and the other engaged in the actual manufacture of plywood. The following are the principal occupations in the veneer unit: Lathe operators, who are in charge of the rotary lathes and who are responsible for the production of the desired grade of veneer; lathe helpers, who "spot" the bolts on the lathe and handle the veneer at the back of the lathe, directing it onto the veneer rack; clipper operators, who cut the strips of veneer into sheets of desired size; drier crew (operator, feeder, and off-bearer) charged with the drying of the green veneer; and patchers and tapers, who prepare the sheets for use in the manufacture of plywood. The principal occupations in the plywood unit are those of the feeders and catchers on the glue spreader, who prepare and assemble the various layers of veneer to form plywood of the desired thickness; the press crew (pressmen and helpers), who apply pressure mechanically to the plywood to set it; the patchers, who repair surface defects in the plywood; the sawyers, who cut the sheets of plywood to size; and the graders, who grade the plywood sheets.

#### UNIONIZATION IN THE LUMBER INDUSTRY

Workers in the basic lumber industry in the Far West are extensively organized. The two principal unions in the field are the International Woodworkers of America, a C. I. O. affiliate, and the Sawmill and Timber Workers' Union of the United Brotherhood of Carpenters and Joiners, an A. F. of L. affiliate. In central California, lumber workers are organized by the Lumber Handlers' Union, which is also a division of the United Brotherhood of Carpenters and Joiners of America. The Washington-Oregon Shingle Weavers District Council, affiliated with the Carpenters and Joiners, has collective-bargaining agreements with virtually all shingle mills in the Far West.

At the time of the Bureau's survey, roughly one-half of the logging camps and sawmills, virtually all of the shingle mills, and all of the plywood mills had collective agreements with labor unions. Well over four-fifths of the workers were employed in unionized operations, indicating that a preponderance of the larger operations were in the unionized group. Most of the large logging camps and sawmills and half or more of the medium-size operations were organized, as compared with less than 5 percent of the small logging camps and sawmills. Of the workers employed in union operations, slightly more than half were members of the International Woodworkers of America (C. I. O.) and slightly less than half were members of the three unions affiliated with the A. F. of L. (Sawmill and Timber

Workers Union, Lumber Handlers Union, and International Shingle Weavers Union of America). Less than 1 percent of the workers were members of the Sawdust Makers Union, an independent union which had an agreement with one large mill in central Washington.

Union organization was more prevalent in the Douglas Fir region than in either the Western Pine or the Redwood region, the respective percentages of workers in operations with union agreements being 88, 77, and 77. Within the Western Pine region the proportion of workers in operations with union agreements varied from a little over 70 percent in the Snake River district to fully 80 percent in the central Oregon district.

The numerical strength of the respective unions varied with regions and, in the Western Pine region, with districts. The International Woodworkers of America appear to have enrolled approximately three-fifths of the union workers in the Douglas Fir region, while A. F. of L. unions appear to lead by the same margin in the Western Pine region as a whole. Within the latter region, however, the International Woodworkers of America appear to lead in the Inland Empire and central Oregon districts, while A. F. of L. unions lead in the other districts. At the time of the survey most of the union workers in the pine districts of California and all of those in the Redwood region were members of A. F. of L. unions.

The above statement on the extent of unionization in the basic lumber industry in the Far West reflects conditions at the time of the survey in August 1944. It is understood that more operations have been unionized since that time, particularly in the Redwood region, where an active organization campaign has been under way.

### *Scope and Method of Survey*

This report is based on wage and related data for workers in four important branches of the basic lumber industry in the Far West—logging camps, sawmills, shingle mills, and plywood mills. No information was obtained for workers in the veneer and cooperage stock mills, as these two segments of the industry are comparatively unimportant in the Far West.

The wage and related data on which this report is based were obtained by trained representatives of the Bureau, who visited the operations and transcribed the data from pay rolls and other records. The earnings data for most operations relate to a representative pay-roll period in August 1944.

Information was obtained from 464 firms having 654 separate basic-lumber operations<sup>4</sup> and employing a total of 61,782 workers. Approximately a fourth of all the logging camps and sawmills, half of the shingle mills, and virtually all of the plywood mills<sup>5</sup> were visited by field representatives of the Bureau. In selecting the sample of firms and operations to be studied in those segments of the industry in which the sampling technique was used, consideration was given

<sup>4</sup> The term "operation" relates to a single unit, such as a logging camp, a sawmill, a shingle mill, or a plywood mill. In the case of partially or completely integrated companies, each unit was counted separately. For example, a company which did both logging and sawmilling was included in both the logging-camp and sawmill counts.

<sup>5</sup> The figures for plywood mills do not include two cooperatives in which virtually all workers own stock and receive a uniform rate of pay, regardless of work performed, and another mill which refused to participate in the study. The loss of the latter mill was offset, however, by weighting the data for a comparable plant in the same locality.

to all important factors—such as size and type of operation, corporate affiliation, geographical distribution, and unionization—which might have a bearing on wages. As the various operations in each of the segments of the industry studied were not sampled in the same proportion, it was necessary in combining the data to assign different weights to the various operations so that each type and size studied might be represented in proportion to its importance in the industry. The figures appearing in this report represent the results of the study after appropriate weighting. This weighting yields a total of 2,001 operations and 131,500 workers, which is believed to represent the approximate size of the four segments of the basic lumber industry in the Far West (table 1).

TABLE 1.—Operations Surveyed and Estimated Total Operations and Workers in Key Occupations Studied, by Region and Branch of Industry, August 1944

Region and type of operation	Number of operations		Estimated total number of workers represented <sup>1</sup>	Region and type of operation	Number of operations		Estimated total number of workers represented <sup>1</sup>
	Actually surveyed	Estimated total represented			Actually surveyed	Estimated total represented	
Far West.....	654	2,001	85,155	Western Pine region.....	291	862	33,553
Logging camps.....	320	998	34,890	Logging camps.....	150	437	12,737
Sawmills.....	286	904	44,705	Sawmills.....	139	423	20,743
Shingle mills.....	20	70	1,678	Plywood mills.....	2	2	73
Plywood mills.....	28	29	3,882				
Douglas Fir region.....	334	1,057	48,487	Redwood region.....	29	82	3,115
Logging camps.....	158	527	20,898	Logging camps.....	12	34	1,255
Sawmills.....	130	433	22,102	Sawmills.....	17	48	1,860
Shingle mills.....	20	70	1,678				
Plywood mills.....	26	27	3,809				

<sup>1</sup> These figures relate to the estimated total number of workers in the Far West employed in the selected key occupations studied. It is estimated that in all occupations there are approximately 131,500 workers, of whom 73,000 are in the Douglas Fir region, 50,500 in the Western Pine region, and 8,000 in the Redwood region.

Occupational wage data were obtained only for selected key occupations which are believed to be representative of the skill and earnings levels of the four segments studied. Approximately two-thirds of all the workers are employed in these key occupations.

In order to insure as full comparability as possible among operations, the Bureau's field representatives used uniform job descriptions in classifying workers in the selected occupations studied. The field representatives also made a very careful check of significant duties performed in each of the occupations, actually observing operations in many instances, and reporting any important variations. On the basis of this supplementary information on duties performed by workers, it was possible for the Bureau to overcome interplant variations to a considerable extent and to arrive at dependable occupational classifications as a basis for the wage information.

The wage data presented in this report are straight-time average hourly earnings, exclusive of premium overtime and shift-differential payments. These earnings reflect incentive earnings resulting from piece work and production bonuses, but do not reflect earnings from nonproduction bonuses.

### *Wage-Payment Practices*

Workers in most occupations of the basic lumber industry are paid on a time-work basis. The few exceptions are fallers and buckers in logging camps, shingle sawyers and packers in shingle mills, and car loaders, lumber pilers, stackers and unstackers in sawmills, all or part of whom are paid on a piece-work basis. Production-bonus systems (as distinguished from simple piece rates) are seldom found in the lumber industry, and when found, consist generally of a flat amount paid to workers in certain occupations for production in excess of a specified quota.

Nonproduction bonuses are rarely found in the industry. One large firm which has both logging and sawmilling operations paid its workers a length-of-service bonus which amounted to 3 percent of their earnings after 1 year of service and 7 percent after 5 years of service. A second plant paid its truck drivers an additional 2½ percent after 6 months of service with the firm, 5 percent after 2 years, and 7½ percent after 3 years, the bonus being paid quarterly.

The most common work schedule in the basic lumber industry at the time of the survey was 8 hours per day and 48 hours per week; nearly three-fourths of the logging camps, two-thirds of the sawmills, and all but three of the plywood mills had such a schedule. Some logging camps and sawmills had an 8-hour day and a 40-hour week, while others had a 9-hour day and a 54-hour week. Shingle mills had only a 6-hour day and a 36-hour week.

Overtime in logging camps, sawmills, and plywood mills was generally paid for at the rate of time and a half after 40 hours per week. In addition, nearly half of the logging camps and more than a third of the sawmills also paid time and a half after 8 hours per day. Most shingle mills paid time and a half after 36 hours per week and many also paid that rate after 6 hours per day. Payment of overtime after 40 hours per week and 8 hours per day in shingle mills was confined very largely to a few mills operated in connection with sawmills.

The entrance rates of pay of common laborers in logging camps, sawmills, and plywood mills followed very closely the minimum rates of pay set by the West Coast Lumber Commission for unskilled workers in the various wage-stabilization districts in the Far West. These rates are 90 cents in the Douglas Fir region and 82.5 cents in the Redwood region. In the Western Pine region the rates range from 80.0 cents in the central Washington district to 87.5 cents in the Central Oregon and northern California districts. The rates set for the other three pine districts are 82.5 cents in the Inland Empire and Snake River districts and 85.0 cents in the central California district. Of the 49 shingle mills reporting entrance rates for common laborers, 33 paid 95 cents an hour and 16 paid 90 cents an hour. The remaining mills either did not employ common laborers or failed to report on the entrance rates paid to such workers.

Multiple-shift operations were found in about a sixth of the sawmills, in more than three-fifths of the shingle mills, and in all but two of the plywood mills. In logging camps it is not feasible to work more than one shift, as operations must be conducted during the daytime. Of the 128 sawmills operating more than one shift—virtually all of which were large mills—102 operated two shifts and 25 operated three shifts. Two-thirds of these mills paid shift differentials, varying from

$2\frac{1}{2}$  to 4 cents an hour for work on the second shift and from 3 to 7 cents an hour for work on the third shift. The most common shift differential in sawmills was 3 cents an hour, paid in 53 mills for work on the second shift and in 13 mills for work on the third shift. Certain other mills paid a differential of  $3\frac{1}{4}$  cents on both shifts. All plywood plants working more than one shift paid a shift differential which was 4 cents an hour in all but 2 of the 27 plywood plants working a second shift and 7 cents an hour in all 23 plants operating a third shift. Forty-four of the shingle mills operated a second shift, but only 4 paid a shift differential to shingle sawyers and packers; this amounted to 1 cent per square. Although no shingle mills operated a third shift at the time of the survey, a few indicated that they paid a differential of from 3 to 5 cents an hour when a third shift was worked.

Paid vacations were granted to workers by somewhat more than half of the logging camps and sawmills. Of the operations with paid-vacation plans, nearly two-thirds of the logging camps and nearly half of the sawmills granted 1 week of vacation with pay after 1,400 hours' work; a vast majority of these same operations also gave workers 4 days paid vacation after 1,120 hours' work and 3 days vacation after 840 hours' work. The next most common vacation plan provided for 1 week after a year's service; a fifth of the logging camps and more than a third of the sawmills with paid-vacation plans were in this group. At the time of the survey, paid vacations in logging camps and sawmills were much more common in the Douglas Fir region than in either the Western Pine or the Redwood regions.<sup>6</sup>

All 29 plywood plants granted 1 week of paid vacation after service periods ranging from 36 weeks in 1 plant to 1 year in 20 plants. In addition, 4 plants also granted 4 days of paid vacation after 1,120 hours of work and 3 days after 840 hours of work. All but 4 of the shingle mills gave a paid vacation of 1 week, but during the war period all workers elected to remain on the job and to accept, instead, a flat pay increase of 3 cents an hour.

### *Wage Structure of the Industry*

Workers in the basic lumber industry in the Far West earned an average of \$1.19 an hour in August 1944 (table 2). This figure represents the average level of straight-time hourly earnings of 85,155 workers in 165 selected key occupations in logging camps, sawmills, shingle mills, and plywood mills. Despite the wide range in the earnings of individual workers, approximately three-fifths of all workers earned between 90 cents and \$1.20 an hour, and nearly a fourth earned between 90 cents and \$1 an hour. Only a tenth of the workers received less than 90 cents an hour, and less than 2 percent had earnings under 80 cents an hour. In contrast, a sixth of the workers earned \$1.50 or more an hour, and nearly 5 percent \$2.00 or more.

Widely different wage levels were found among the four branches of the industry studied. Workers in shingle mills had the highest straight-time average hourly earnings, \$1.45, and workers in logging camps had the next highest earnings, \$1.38, while workers in plywood mills received the lowest earnings, \$1.03. The average earnings of

<sup>6</sup> Of the logging camps studied, 70 percent in the Douglas Fir region, as against 40 percent in the Western Pine region and 50 percent in the Redwood region, provided vacations with pay. Among the sawmills, the percent varied from 62 percent in the Douglas Fir region to 43 percent in the Western Pine region and to 44 percent in the Redwood region.

sawmill workers, \$1.05, were only 2 cents above those of plywood workers. Equally wide variations in earnings of individual workers are indicated by the distributions shown in table 2 for each branch. For example, less than a tenth of the workers in both shingle mills and logging camps had earnings under \$1 an hour, while somewhat over half of the workers in sawmills and plywood mills earned less than that amount. In contrast, well over a fourth of the workers in logging camps and not far from half of those in shingle mills earned \$1.50 or more an hour, whereas no workers in plywood mills and only 6 percent of the sawmill workers received earnings as high as these.

TABLE 2.—*Distribution of Workers in Basic Lumber Industry in Far West by Straight-Time Average Hourly Earnings and Branch of Industry, August 1944*

Average hourly earnings	Percentage distribution				
	All branches	Logging camps	Sawmills	Shingle mills	Plywood mills
Under 80.0 cents.....	1.2	0.1	2.3	-----	(1)
80.0 and under 82.5 cents.....	.8	.2	1.3	-----	-----
82.5 and under 85.0 cents.....	2.4	.8	4.0	-----	-----
85.0 and under 87.5 cents.....	2.6	.6	4.6	-----	0.3
87.5 and under 90.0 cents.....	3.1	1.3	4.9	-----	.4
90.0 and under 92.5 cents.....	8.2	2.5	11.8	-----	20.1
92.5 and under 95.0 cents.....	5.3	1.3	8.2	-----	11.2
95.0 and under 97.5 cents.....	6.4	.8	10.3	2.4	11.5
97.5 and under 100.0 cents.....	4.2	2.1	5.4	3.7	9.0
100.0 and under 102.5 cents.....	7.3	4.9	9.6	3.8	4.7
102.5 and under 105.0 cents.....	3.3	2.1	4.1	3.3	4.3
105.0 and under 107.5 cents.....	4.2	5.1	3.6	4.1	2.6
107.5 and under 110.0 cents.....	3.6	3.8	3.6	2.1	3.2
110.0 and under 112.5 cents.....	3.7	4.8	2.8	1.2	5.0
112.5 and under 115.0 cents.....	2.8	2.9	2.7	2.3	3.9
115.0 and under 117.5 cents.....	4.1	4.4	3.5	1.3	9.6
117.5 and under 120.0 cents.....	3.0	5.0	1.5 <sup>1</sup>	1.5	2.3
120.0 and under 122.5 cents.....	2.6	3.8	1.7	2.1	3.9
122.5 and under 125.0 cents.....	1.6	2.3	1.1	1.9	1.2
125.0 and under 127.5 cents.....	3.9	6.2	2.1	2.0	4.4
127.5 and under 130.0 cents.....	1.6	2.8	.7	2.0	1.5
130.0 and under 135.0 cents.....	2.6	4.1	1.5	3.9	.7
135.0 and under 140.0 cents.....	2.2	3.6	1.3	5.0	.1
140.0 and under 145.0 cents.....	1.9	3.0	.9	5.4	.1
145.0 and under 150.0 cents.....	1.6	2.6	.7	6.6	(1)
150.0 and under 155.0 cents.....	2.7	5.0	1.1	5.4	-----
155.0 and under 160.0 cents.....	1.5	2.5	.6	7.4	-----
160.0 and under 165.0 cents.....	1.2	1.7	.8	4.6	-----
165.0 and under 170.0 cents.....	.9	1.3	.4	6.0	-----
170.0 and under 175.0 cents.....	.7	1.2	.3	2.6	-----
175.0 and under 180.0 cents.....	1.1	2.0	.4	4.1	-----
180.0 and under 185.0 cents.....	.7	1.3	.3	3.5	-----
185.0 and under 190.0 cents.....	.9	1.8	.1	3.1	-----
190.0 and under 195.0 cents.....	.6	1.3	.1	2.7	-----
195.0 and under 200.0 cents.....	.6	1.1	.1	1.8	-----
200.0 cents and over.....	4.9	9.7	1.6	4.2	-----
Total.....	100.0	100.0	100.0	100.0	100.0
Total number of workers.....	85,155	34,890	44,705	1,678	3,882
Average hourly earnings.....	\$1.19	\$1.38	\$1.05	\$1.45	\$1.03

<sup>1</sup> Less than a tenth of 1 percent.

Significant differences in earnings as between regions and districts are found in the logging camps and sawmills of the Far West. In logging camps the earnings of workers in the Douglas Fir region were 11 cents higher than those of workers in the Redwood region and 20 cents higher than those of workers in the Western Pine region. More-

over, within the Western Pine region, earnings were somewhat higher on the whole in central Oregon and California than in the remainder of the region. Important geographic variations were found also in the earnings of sawmill workers.

## OCCUPATIONAL AVERAGE HOURLY EARNINGS

The figures presented in tables 3-6 for selected key occupations in each of the four branches of the industry studied indicate that inter-branch variations in wage levels result very largely from basic differences in occupational structure and in skill requirements. Logging, for example, requires the services of highly specialized workers and for that reason the occupational structure of this branch of the industry is radically different from that of either sawmills, shingle mills, or plywood mills. This factor no doubt accounts to a considerable extent for the comparatively high level of earnings in most occupations in logging camps.

TABLE 3.—Straight-Time Average Hourly Earnings of Workers in Logging Camps in Far West, by Occupation, Region, and District, August 1944

Occupation	Total Far West	Douglas Fir re-region	Western Pine region							Redwood re-region
			All districts	Inland Empire	Snake River	Central Washington	Central Oregon	North-central California	Central California	
Total, selected occupations.....	\$1.38	\$1.45	\$1.26	\$1.17	\$1.24	\$1.14	\$1.36	\$1.32	\$1.21	\$1.34
Blacksmiths.....	1.21	1.28	1.10	1.09	1.10	.98	1.19	1.12	(1)	1.18
Brakemen, head.....	1.14	1.18	1.07	(1)	(1)	(1)	1.14	1.07	1.01	1.07
Brakemen, second.....	1.03	1.07	.98	(1)	(1)	-----	1.03	1.01	.91	.95
Bull buckers.....	1.48	1.53	1.40	1.17	1.73	(1)	1.24	1.59	1.23	1.21
Bulldozer operators.....	1.36	1.44	1.29	1.24	1.31	1.16	1.34	1.33	1.29	1.29
Cat doctors.....	1.29	1.39	1.24	1.10	1.15	1.06	1.34	1.29	1.28	1.25
Cat drivers (tractor).....	1.30	1.40	1.24	1.14	1.10	1.31	1.27	1.29	1.28	1.22
Chasers, high-lead and skidder-side.....	1.12	1.12	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Choker setters, cat side.....	1.06	1.10	1.00	.91	.95	1.00	1.03	1.06	1.01	1.06
Donkey doctors.....	1.36	1.36	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Engineers—										
High-lead and skidder-slackline.....	1.34	1.34	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Mechanical loading.....	1.30	1.33	1.27	1.22	1.12	1.19	1.54	1.30	1.20	1.16
Rail transportation.....	1.20	1.23	1.17	(1)	(1)	(1)	1.24	1.17	1.11	1.11
Fallers and buckers, hand.....	1.70	1.78	1.58	1.43	1.58	1.30	1.87	1.72	1.35	1.29
Fallers and buckers, power.....	1.85	1.97	1.61	1.25	1.34	(1)	1.77	1.55	1.79	1.90
Filers, woods.....	1.36	1.43	1.17	1.00	1.06	1.00	1.30	1.30	1.17	1.19
Firemen, rail transportation.....	.99	1.01	.96	(1)	(1)	(1)	.99	.98	.91	.92
Head loaders, mechanical loading.....	1.34	1.38	1.29	1.27	1.14	1.32	1.45	1.30	1.25	1.20
Head rigging slingers, high-lead and skidder-slackline.....	1.31	1.31	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Hook tenders, cat side.....	1.41	1.47	1.26	(1)	(1)	-----	1.39	1.26	1.31	1.36
Hook tenders, high-lead and skidder-slackline.....	1.52	1.52	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Limbers and knotters.....	1.08	(1)	1.08	.94	(1)	.92	1.03	1.22	1.11	-----
Motor patrol operators.....	1.18	1.21	1.16	1.07	1.13	.95	1.22	1.29	1.18	(1)
Powdermen.....	1.12	1.20	1.02	1.01	(1)	.93	1.03	1.04	1.04	1.08
Rigging slingers, cat side.....	1.12	1.24	1.02	.94	(1)	-----	1.08	1.10	1.04	1.21
Scalers, woods.....	1.17	1.29	1.03	.93	.96	.96	1.18	1.09	1.04	1.09
Second loaders, mechanical loading.....	1.13	1.20	1.08	1.10	1.03	.99	1.12	1.09	1.03	1.07
Second rigging slingers, high-lead and skidder-slackline.....	1.18	1.18	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Section hands.....	.88	.90	.85	.83	.83	(1)	.88	.87	.83	.85
Tire and grease men.....	1.02	1.06	.97	.91	.99	(1)	1.01	1.02	.99	(1)
Truck drivers, hauling.....	1.12	1.18	1.07	1.00	.94	1.03	1.10	1.14	1.10	1.10
Truck mechanics.....	1.22	1.26	1.15	1.08	1.10	1.04	1.11	1.27	1.19	(1)
Whistlepunks, high-lead and skidder-slackline.....	1.07	1.07	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)

<sup>1</sup> Number of workers and/or plants insufficient to justify presentation of an average.

<sup>2</sup> No information obtained for workers in this occupation, as the high-lead or skidder-slackline method of yarding is seldom found in this region.

The very wide range in occupational earnings in three of the four branches is due in part to high incentive earnings in some occupations, such as fallers and buckers in logging camps, and in part to the high earnings of some very skilled workers such as saw filers in sawmills and shingle mills. In three-fourths of the occupations, however, workers earned between \$1.05 and \$1.40 in logging camps and between 90 cents and \$1.25 in sawmills. The total range in earnings in plywood mills was from 90 cents for watchmen to \$1.27 for machinists.

Among the highest-paid workers in the basic lumber industry are head filers in sawmills and shingle mills, who are perhaps the most skilled workers in the industry, and shingle sawyers in shingle mills and fallers and buckers in logging camps who are incentive workers. Earnings in these occupations averaged \$1.70 or more an hour. Other workers who earned \$1.50 or more an hour were hook tenders on a skidder side in logging, filers' helpers in shingle mills, and second filers, head rig sawyers and yard pilers in sawmills. Pilers are very often paid on an incentive basis and this explains their high earnings.

The next highest wages are generally paid to skilled maintenance workers and to skilled workers in a number of processing occupations, most of which are in logging camps. In logging camps, earnings between \$1.20 and \$1.40 were received by all maintenance workers and by engineers operating yarding, loading, and railroad engines, by cat and bulldozer operators, and by head loaders and head rigging slingers. Maintenance workers in the other branches earned somewhat less, their earnings varying from \$1.10 to \$1.25 in sawmills and from \$1.15 to \$1.30 in plywood mills.

TABLE 4.—*Straight-Time Average Hourly Earnings of Workers in Sawmills in Far West, by Occupation, Region, and District, August 1944*

Occupation	Total Far West	Douglas Fir region	Western Pine region							Redwood region
			Total all districts	Inland Empire	Snake River	Central Washington	Central Oregon	North-east California	Central California	
Total, selected occupations.....	\$1.05	\$1.03	\$1.06	\$0.97	\$1.03	\$0.90	\$1.12	\$1.14	\$1.15	\$1.06
Sawmills, including planing mills:										
Blacksmiths.....	1.15	1.21	1.11	1.13	1.05	1.05	1.16	1.15	1.05	1.11
Car loaders.....	1.15	1.06	1.26	1.13	1.08	.85	1.42	1.53	1.16	1.40
Carpenters.....	1.12	1.16	1.11	1.02	(1)	(1)	1.09	1.16	1.23	1.05
Carrier drivers.....	1.04	1.05	1.01	.94	1.00	.95	1.01	1.05	1.03	.99
Clean-up men.....	.88	.90	.86	.83	.82	.81	.88	.88	.87	.85
Cut-off-saw operators.....	.96	.98	.91	.90	.84	.84	.93	.99	.94	.96
Deckmen.....	.96	.98	.94	.91	.89	.88	.98	.96	1.01	.92
Doggers, head rig.....	.96	.97	.96	.96	.92	.88	1.03	.93	.95	.98
Dragsaw men.....	.98	.99	.96	.91	.86	(1)	1.03	1.00	.92	1.07
Edgermen.....	1.14	1.16	1.11	1.03	1.03	1.05	1.16	1.15	1.16	1.26
Edger-off-bearers.....	.91	.93	.89	.84	.85	.86	.93	.91	.87	.90
Electricians.....	1.20	1.21	1.20	1.24	(1)	(1)	1.20	1.22	1.12	1.12
Filers, bench.....	1.34	1.37	1.31	1.25	1.23	1.20	1.40	(1)	(1)	1.23
Filers, head.....	1.88	1.80	1.98	1.87	1.82	1.63	2.40	1.92	1.90	1.68
Filers' helpers, floor.....	1.10	1.12	1.07	.99	1.04	(1)	1.13	1.14	1.05	1.01
Filers, second.....	1.56	1.46	1.64	1.58	1.69	1.55	1.77	1.59	1.56	1.42
Firemen.....	.96	.99	.94	.90	.91	.86	.97	.96	.97	.97
Gang-saw off-bearers.....	.97	.97	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Gang-saw spotters.....	.94	.94	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Gang sawyers.....	1.13	1.13	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Garage mechanics.....	1.14	1.15	1.13	1.00	1.01	.99	1.18	1.26	1.15	1.25
Graders, finish chain.....	1.10	1.07	1.15	1.03	1.12	1.03	1.26	1.30	(1)	.99
Graders or markers, green chain.....	1.09	1.07	1.11	.95	.99	.94	1.23	1.18	1.19	1.10
Graders, rough dry chain.....	1.14	1.06	1.16	1.00	1.03	(1)	1.34	1.27	1.19	(1)

See footnotes at end of table.

TABLE 4.—Straight-Time Average Hourly Earnings of Workers in Sawmills in Far West, by Occupation, Region, and District, August 1944—Continued

Occupation	Total Far West	Douglas Fir region	Western Pine region						Redwood region	
			Total all districts	Inland Empire	Snake River	Central Washington	Central Oregon	Northwestern California		Central California
Sawmills, including planing mills—Continued.										
Hog feeders.....	\$0.91	\$0.95	\$0.86	\$0.84	\$0.81	\$0.80	\$0.92	\$0.89	\$0.86	\$0.88
Kiln tenders.....	1.06	1.06	1.05	(1)	(1)	(1)	1.08	1.07	(1)	1.11
Knife grinders.....	1.17	1.17	1.19	1.09	(1)	(1)	1.26	1.25	1.30	1.11
Machinists.....	1.21	1.25	1.19	1.09	(1)	(1)	1.21	1.25	1.23	1.18
Matcher feeders.....	.97	1.01	.91	.89	.91	(1)	.96	.91	(1)	1.02
Matcher off-bearers.....	.90	.94	.86	.84	.87	-----	.91	(1)	(1)	.88
Millwrights' helpers.....	1.02	1.04	.95	.92	.94	.89	.95	1.01	1.01	.99
Off-bearers, head rig.....	.95	.98	.92	.90	.86	.89	.95	.94	.94	1.02
Oilers.....	.96	1.00	.92	.90	.89	.84	.96	.95	.91	1.01
Operating engineers.....	1.08	1.13	1.05	1.00	.97	1.04	1.10	1.11	1.00	1.11
Operating millwrights.....	1.19	1.20	1.15	1.11	1.01	.99	1.19	1.21	1.20	1.33
Pilers, yard.....	1.57	.97	1.78	1.19	1.87	-1.15	2.16	1.98	2.08	1.12
Pipefitters.....	1.18	1.14	1.23	1.16	(1)	-----	1.22	1.27	(1)	1.06
Pondmen.....	.99	1.02	.95	.89	.89	.87	.97	1.05	.95	.94
Pullers, dry chain.....	1.02	.93	1.07	1.04	.95	-----	.99	1.24	.95	(1)
Pullers, green chain.....	1.02	.97	1.12	.89	.91	.96	1.18	1.25	1.52	.99
Resaw off-bearers, planing mill.....	.90	.92	.87	.83	.89	-----	(1)	.89	(1)	.92
Resawyers, head mill.....	1.09	1.10	1.05	(1)	.93	(1)	1.04	1.13	1.09	1.01
Resawyers, planing mill.....	.99	.98	1.01	.89	1.10	-----	1.01	1.05	(1)	(1)
Sawyers, head rig.....	1.50	1.54	1.47	1.38	1.42	1.38	1.56	1.53	1.52	1.46
Setters, head rig.....	1.09	1.07	1.11	1.04	1.06	1.03	1.17	1.18	1.12	1.11
Set-up men, planing mill.....	1.16	1.18	1.14	1.09	1.10	(1)	1.20	1.23	(1)	(1)
Sizer feeders.....	.96	.99	.93	(1)	(1)	(1)	.94	.93	(1)	(1)
Sizer off-bearers.....	.92	.94	.87	(1)	(1)	(1)	-----	.89	.89	(1)
Sizer operators.....	1.13	1.10	1.17	-----	(1)	(1)	1.18	1.31	1.19	(1)
Slipmen.....	.94	.97	.90	.88	.83	.84	.94	.93	.93	.91
Sorters, planed lumber.....	.91	.93	.87	.83	.91	.80	.91	(1)	(1)	(1)
Stacker-carrier operators.....	1.03	1.07	.97	.91	.91	(1)	1.01	1.02	1.02	1.25
Stackers, dry kiln.....	1.23	1.05	1.38	1.13	1.25	(1)	1.55	1.65	(1)	1.26
Straighteners, green chain.....	.93	.93	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Tallymen.....	1.05	1.06	1.03	.94	.99	(1)	1.11	1.10	.96	1.06
Timber handlers.....	.93	.93	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Transfer-car operators, dry kiln.....	.95	.97	.94	.85	.87	(1)	.98	1.00	(1)	(1)
Trimmermen, head mill.....	1.02	1.05	.98	.95	.92	.91	1.04	1.00	.99	1.12
Trimmermen, planing mill.....	.96	.98	.92	.88	.94	.86	.95	.91	(1)	.89
Trimmer spotters.....	.96	.97	.94	.88	.84	(1)	.98	.98	.91	.88
Truck drivers, yard.....	1.00	1.04	.98	.94	.94	.87	.99	1.00	1.06	(1)
Unstackers, dry kiln.....	1.11	.98	1.19	.88	.92	(1)	1.36	1.29	(1)	(1)
Utility men.....	.88	.90	.85	.82	.84	.81	.87	.88	.85	.90
Watchmen.....	.84	.87	.81	.77	.78	.69	.87	.84	.82	.82
Box factories:										
Car loaders.....	.88	(2)	.88	.80	(1)	.78	.89	.96	.84	(2)
Cut-off-saw off-bearers.....	.81	(2)	.81	.80	(1)	.72	.85	.85	.83	(2)
Cut-off-saw operators.....	1.05	(2)	1.05	.93	(1)	.93	1.11	1.14	1.11	(2)
Machine hikeaways.....	.81	(2)	.81	(1)	-----	.74	.86	.86	.84	(2)
Nailing, stapling, and stitching machine operators.....	.88	(2)	.88	.84	(1)	.80	.92	.94	.91	(2)
Planer feeders.....	.91	(2)	.91	.84	(1)	.83	.97	.94	-----	(2)
Planermen.....	1.15	(2)	1.15	(1)	-----	(1)	1.20	1.19	(1)	(2)
Resawyers.....	.96	(2)	.96	.90	(1)	.84	1.02	1.04	.99	(2)
Resaw off-bearers.....	.81	(2)	.81	.74	(1)	.74	.86	.87	.84	(2)
Tieing-machine operators.....	.87	(2)	.87	.83	(1)	.79	1.04	1.00	.91	(2)

<sup>1</sup> Number of workers and/or plants insufficient to justify presentation of an average.

<sup>2</sup> No information obtained for workers in this occupation, which is seldom found in this region.

Most of the machine operators in sawmills and plywood mills and a number of moderately skilled workers in logging had earnings within the 20-cent interval from \$1 to \$1.20. Also included in this group were workers in a number of other occupations such as lumber graders and green and dry chain pullers in sawmills, veneer driers and patchers in plywood mills, choker setters, chasers and truck drivers in logging camps, and deckmen in shingle mills.

Earnings under \$1 an hour were very largely confined to sawmills and plywood mills and were paid to workers in about half of the occupations. In both branches this group of occupations includes

helpers on a wide variety of machines. Also included are such workers as car loaders, hand and power truckers, and veneer graders, matchers, tapers and repairers in plywood mills, and deckmen, firemen, hog feeders, pondmen, slipmen, and some of the lighter machine operations in planing mills and box factories.

TABLE 5.—*Straight-Time Average Hourly Earnings of Workers in Shingle Mills in Douglas Fir Region, by Occupation, August 1944*

Occupation	Number of workers	Average hourly earnings
All selected occupations.....	1, 678	\$1. 45
Block pilers.....	151	1. 07
Cut-off-saw operators.....	105	1. 35
Deckmen.....	54	1. 17
Filers, head.....	42	2. 00
Filers' helpers.....	22	1. 50
Knee bolters.....	68	1. 48
Loaders, car and truck.....	56	1. 02
Millwrights.....	11	1. 14
Shingle packers.....	485	1. 45
Shingle sawyers.....	548	1. 71
Splitter-men.....	19	1. 11
Tallymen.....	66	1. 08
Watchmen.....	51	. 98

In all selected key occupations in logging camps and in more than half of the occupations in sawmills, earnings were higher in the Douglas Fir region than in either the Western Pine or the Redwood region. In most of the occupations for which comparative figures are shown, the differential in hourly earnings in favor of Douglas Fir workers was between 10 and 20 cents in logging camps and between 5 and 10 cents in sawmills. The differences in occupational earnings between the Western Pine and the Redwood regions were neither consistent nor large. In about half of the occupations earnings were higher in the Western Pine region and in the remainder they either were the same in both regions or were higher in the Redwood region.

TABLE 6.—*Straight-Time Average Hourly Earnings of Workers in Plywood Mills in Far West, by Occupation, August 1944*

Occupation	Number of workers	Average hourly earnings	Occupation	Number of workers	Average hourly earnings
All selected occupations.....	3, 882	\$1. 03	Pipefitters.....	20	\$1. 20
Barkers.....	72	1. 11	Plug cutters.....	74	. 95
Blacksmiths.....	7	1. 21	Plywood stock craters.....	27	. 96
Car loaders.....	133	. 95	Pondmen.....	86	1. 09
Carpenters.....	40	1. 17	Pressmen.....	150	1. 10
Clean-up men.....	95	1. 00	Pressmen's helpers.....	90	. 95
Clipper-machine operators, automatic.....	56	1. 13	Rip-saw operators.....	51	1. 11
Clipper-machine operators, hand.....	54	1. 11	Truckers, hand.....	27	. 97
Crane followers.....	16	. 98	Truckers, power.....	40	. 98
Cranemen.....	67	1. 02	Veneer driers.....	69	1. 05
Cut-off-saw operators.....	58	1. 11	Veneer drier feeders.....	352	. 92
Electricians.....	39	1. 21	Veneer drier-off-bearers.....	277	. 91
Electricians' helpers.....	8	1. 07	Veneer graders.....	179	. 99
Glue-spreader catchers.....	207	1. 20	Veneer jointermen.....	77	. 96
Glue-spreader feeders.....	124	1. 10	Veneer lathe apron men.....	57	. 96
Glue-spreader helpers.....	49	. 95	Veneer lathe operators.....	72	1. 25
Inspectors.....	70	. 96	Veneer lathe spotters.....	70	1. 02
Machinists.....	32	1. 27	Veneer matchers.....	15	. 99
Millwrights.....	102	1. 21	Veneer repairers, automatic pluggers.....	33	. 94
Millwright's helpers.....	21	1. 03	Veneer repairers, hand plugger.....	241	. 91
Off-bearers, saws.....	77	. 91	Veneer repairers, machine cutters.....	124	. 95
Others.....	17	1. 00	Veneer tapers, machine.....	61	. 99
Patchers, plywood and/or panels.....	285	1. 16	Watchmen.....	61	. 90

Within the Western Pine region occupational earnings were generally higher in the central Oregon and the northern and central California districts than in the Inland Empire, Snake River, and central Washington districts.

#### INFLUENCE OF INCENTIVE EARNINGS ON WAGE STRUCTURE OF INDUSTRY

Although only slightly more than a sixth of the workers in the basic lumber industry are incentive workers, the high earnings of these workers exert considerable influence on the wage structure of the industry. As a group, incentive workers averaged \$1.87 an hour in logging camps or 68 cents more than time workers (table 8). In sawmills and shingle mills the average hourly earnings of incentive workers exceeded those of time workers by 59 and 36 cents, respectively. These differences are borne out by the figures shown in table 7, which indicate that 69 percent of the incentive workers earned \$1.50 or more an hour and only 3 percent earned less than \$1, whereas only 5 percent of the time workers received as much as \$1.50 an hour and as high as 40 percent received less than \$1.

TABLE 7.—Percentage Distribution of Workers in Basic Lumber Industry in Far West, by Hourly Earnings and Method of Wage Payment

Branch of industry	Percent of workers with average hourly earnings of—					
	Under \$1		\$1 and under \$1.50		\$1.50 and over	
	Time workers	Incentive workers	Time workers	Incentive workers	Time workers	Incentive workers
All branches.....	40	3	55	28	5	69
Logging camps.....	12	2	77	21	11	77
Sawmills.....	56	4	41	48	3	48
Shingle mills.....	16		65	38	19	62
Plywood mills.....	53		47			

The very uneven distribution of incentive workers among the four branches of the industry studied accounts for some of the differences in wage levels between these branches. There are no incentive workers in plywood mills, and only 6.7 percent of the workers in sawmills are paid on an incentive basis. These two branches, it will be recalled, had respectively the lowest and next lowest general level of wages in the industry. In contrast, in shingle mills where the highest wages were found and in logging camps, next in order, 62 and 28 percent of the workers, respectively, were incentive workers.

To a considerable extent the interregional and interdistrict differences in earnings indicated in tables 3 and 4 for both logging camps and sawmills are also the result of variations in the proportion of incentive workers and in the level of the earnings of these workers. This is true of much of the 8-cent advantage in earnings which logging workers in the Redwood region enjoyed over similar workers in the Western Pine region, as the earnings of time workers in both regions were only 2 cents apart.

TABLE 8.—*Straight-Time Average Hourly Earnings in Logging Camps, Sawmills, and Shingle Mills, by Region, District, and Method of Wage Payment, August 1944*

Region and district	Logging camps		Sawmills		Shingle mills	
	Time workers	Incentive workers	Time workers	Incentive workers	Time workers	Incentive workers
Total, Far West.....	\$1.19	\$1.87	\$1.01	\$1.60	\$1.23	\$1.59
Douglas Fir region.....	1.25	1.96	1.02	1.42	1.23	1.59
Western Pine region.....	1.10	1.70	.99	1.69		
Inland Empire district.....	1.01	1.53	.94	1.27		
Snake River district.....	1.05	1.67	.96	1.83		
Central Washington district.....	1.03	1.36	.89	1.40		
Central Oregon district.....	1.16	1.87	1.03	1.76		
Northern California district.....	1.17	1.88	1.04	1.73		
Central California district.....	1.11	1.73	1.04	1.95		
Redwood region.....	1.12	1.79	1.02	1.25		

## COMPARISON OF EARNINGS IN UNION AND NONUNION OPERATIONS

Wages in union operations as a whole were higher than those in nonunion, but the difference was very slight. Since the Bureau's 1939-40 study revealed somewhat greater differentials in favor of the union operations, it is apparent that the extraordinary conditions of wartime have operated to the advantage of the lower-paid nonunion workers. In the present study the comparison of earnings between union and nonunion operations is necessarily limited to logging camps and sawmills, as all plywood mills and virtually all shingle mills have collective-bargaining agreements with organized labor.

As may be seen from the figures shown in table 9, earnings in basic lumber operations in the Far West were only slightly higher on the average in union than in nonunion operations, the respective averages being \$1.19 and \$1.18. Union workers earned more than nonunion workers in logging camps (\$1.39 compared to \$1.35), but less in sawmills (\$1.04 to \$1.05). Earnings of union workers were slightly higher than those of nonunion workers in the Douglas Fir region, but slightly lower in the other two regions.

TABLE 9.—*Straight-Time Average Hourly Earnings of Workers in Basic Lumber Industry in Far West, by Region, District, and Unionization, August 1944*

Region and district	Total all branches		Logging camps		Sawmills		Shingle mills	Plywood mills
	Union	Non-union	Union	Non-union	Union	Non-union	Union <sup>1</sup>	Union
Total, Far West.....	\$1.19	\$1.18	\$1.39	\$1.35	\$1.04	\$1.05	\$1.45	\$1.03
Douglas Fir region.....	1.23	1.22	1.46	1.43	1.03	1.05	1.45	1.03
Western Pine region.....	1.13	1.15	1.25	1.28	1.07	1.05		
Inland Empire district.....	1.05	1.04	1.20	1.11	.96	.98		
Snake River district.....	1.13	1.04	1.28	1.15	1.05	.97		
Central Washington district.....	.94	1.03	1.12	1.31	.88	.96		
Central Oregon district.....	1.18	1.30	1.33	1.50	1.10	1.19		
Northern California district.....	1.19	1.25	1.28	1.37	1.15	1.10		
Central California district.....	1.18	1.17	1.19	1.32	1.18	1.03		
Redwood region.....	1.17	1.20	1.34	1.34	1.03	1.12		

<sup>1</sup> Includes earnings of 20 workers in small nonunion mills.

Any discussion of union-nonunion wage differences in the western lumber industry should mention a number of special factors that have tended to reduce or obscure their magnitude. One consideration is the extent and recency of union organization. In the Douglas Fir region union organization is somewhat more extensive and operations have been organized for a longer period of time than in either the Western Pine or the Redwood regions. Other factors which may affect earnings and tend to obscure somewhat the actual influence of unionization on wages are size of operation and type of equipment. Unionization, it will be recalled, has been confined chiefly to the larger operations, whereas the smaller operations have generally been unorganized. It should also be borne in mind that, under the wage-stabilization program, trade-unions have had comparatively limited opportunities to seek wage advances for their members. Furthermore, such general increases as were granted by the War Labor Board to workers in union plants which were parties to dispute cases before the Board were also authorized for all workers in basic lumber operations in the region.

#### VARIATIONS IN EARNINGS, BY SIZE OF OPERATION

There appears to be no consistent relationship between size of operation and level of wages in the industry. An examination of the data reveals that wages were slightly higher in general in the larger camps than in the smaller camps. In some occupations in sawmills, earnings tended to vary with the size of the mill, but the amount of the difference varied considerably with regions.

#### *Trend in Wage Rates During the War Period*

The wage rates of 1944 represent a considerably higher level of wages than prevailed before the outbreak of the war. With the inauguration of the defense program and a sharp increase in demand for all types of lumber and timber products, labor unions in the Douglas Fir region demanded and obtained a series of wage increases. The minimum rate of pay, which had been 42½ cents under the NRA, increased to 50 cents as a result of the strike settlement of 1935; it stood at 62½ cents at the start of the war and rose to 75 cents early in 1941 as a result of a 5-cent increase in 1940 and a 7½-cent increase in 1941. An increase of 7½ cents was granted by the National War Labor Board early in 1942 in connection with dispute cases involving both unions. The latest general increase in wages in the Douglas Fir region (7½ cents) was granted in December 1942 and made retroactive to September of that year by the West Coast Lumber Commission of the National War Labor Board. This raised the minimum rate for the industry in the Douglas Fir region to 90 cents an hour. Wages in this region were further stabilized in 1942 when the War Labor Board approved the report of a special panel which recommended that wages in the Willamette Valley of Oregon be raised to the level of those of the region as a whole.

A special tabulation of data reported monthly to the Bureau's Division of Employment Statistics by a large number of logging and sawmill operations reveals that between January 1939 and October 1944 straight-time average hourly earnings of lumber workers in the

Douglas Fir region have risen by about 53 percent, while gross hourly earnings have advanced by nearly 59 percent (see table 10).<sup>7</sup> Most of the increase in earnings, however, took place after January 1941, straight-time earnings since that time rising by approximately 40 percent, and gross earnings advancing by about 45 percent.

TABLE 10.—*Weekly Hours and Hourly Earnings in Basic Lumber Industry, Douglas Fir and Western Pine Regions, in Far West, 1939-44*

Year and month	Douglas Fir region			Western Pine region		
	Weekly hours	Hourly earnings <sup>1</sup>		Weekly hours	Hourly earnings <sup>1</sup>	
		Unad-justed <sup>2</sup>	Ad-justed <sup>3</sup>		Unad-justed <sup>2</sup>	Ad-justed <sup>3</sup>
1939—January.....	35.1	\$0.75	\$0.75	35.5	\$0.72	\$0.72
April.....	34.5	.76	.76	36.2	.71	.70
July.....	32.9	.75	.75	34.9	.72	.72
October.....	37.2	.76	.74	39.6	.73	.72
1940—January.....	34.6	.76	.76	33.1	.75	.75
April.....	36.0	.76	.76	36.7	.73	.72
July.....	33.4	.75	.75	35.4	.74	.74
October.....	36.7	.78	.77	38.5	.75	.74
1941—January.....	36.0	.82	.82	35.5	.79	.79
April.....	37.9	.83	.82	36.5	.79	.78
July.....	35.6	.88	.88	36.6	.84	.83
October.....	38.2	.91	.89	38.8	.86	.85
1942—January.....	34.6	.91	.91	35.3	.87	.87
April.....	37.7	.94	.92	37.1	.89	.88
July.....	38.0	1.01	1.00	38.2	.98	.96
October.....	41.3	1.06	1.02	41.7	1.02	.99
1943—January.....	33.9	1.12	1.12	36.0	1.00	.99
April.....	40.8	1.15	1.12	40.6	1.06	1.02
July.....	39.9	1.18	1.14	40.5	1.13	1.09
October.....	41.9	1.18	1.14	41.9	1.15	1.10
1944—January.....	39.6	1.18	1.15	39.5	1.11	1.08
April.....	41.9	1.19	1.14	40.7	1.15	1.11
July.....	37.9	1.20	1.19	39.6	1.18	1.15
October.....	41.7	1.19	1.15	43.3	1.18	1.12

<sup>1</sup> Figures for any one month have not been adjusted to include any retroactive wage increases.

<sup>2</sup> Gross earnings including both premium overtime and shift-differential earnings.

<sup>3</sup> Net earnings excluding premium overtime but including shift-differential earnings.

Although the general increases in wages obtained by the unions through collective bargaining or awarded or authorized by Government agencies prior to 1943 pertained only to the Douglas Fir region, it appears that much the same general pattern of increase took place in the Western Pine region. For example, workers in the Western Pine region appear to have received in 1942 increases equivalent to the 7½-cent increase granted by the Commission early in 1942 to the Douglas Fir workers. The most important recent wage increase in the Western Pine region was granted by the West Coast Lumber Commission during the spring of 1943. Workers in the pine operations which were parties to the dispute cases before the Commission were granted a 7½-cent increase, which was retroactive in full to September 1942 and in part to the spring of 1942. Other pine operations not

<sup>7</sup> The figures for each month are based on wages received for work performed during a pay-roll period nearest to the 15th of that month. No adjustments have been made in the figures to take into account retroactive wage increases, as information is not available regarding the amount of the retroactive payments. The figures for October 1942 and for January and April 1943 for the Western Pine region would undoubtedly be a few cents higher if the increase which was retroactive from May 1943 to September 1942 was included. Similarly the figure for October 1942 in the Douglas Fir region would be a few cents higher if it included the increase which was retroactive from December to September of that year.

parties to the dispute cases were permitted by the Commission to grant a similar increase but, although most of them availed themselves of the opportunity, many did not make the increases retroactive. The Commission, with labor members dissenting, did not establish a single minimum rate for the Western Pine region as a whole, as had been done in the case of the Douglas Fir region, but established instead six labor-market areas and set minimum rates for these areas ranging from 80 cents for central Washington to 87½ cents for central Oregon and northern California. The Commission later recommended a minimum rate of 85 cents for the Redwood region, but this was reduced to 82½ cents by the Director of Economic Stabilization.

The increase in earnings after January 1939 was somewhat greater in the Western Pine region than in the Douglas Fir region. During this period straight-time earnings rose nearly 56 percent and gross earnings rose approximately 64 percent (see table 10). As in the Douglas Fir region, most of the increase in earnings occurred after January 1941. Since that time straight-time hourly earnings have risen by 42 percent and gross earnings by 49 percent.

Although no figures are presented in table 10 for the Redwood region, it is believed that the pattern of change in earnings in that region since 1939 follows that in the other two regions in the Far West.

#### CHANGES IN OCCUPATIONAL EARNINGS, 1939-44

The comparative figures <sup>8</sup> presented in table 11 for 46 selected basic lumber occupations, show that the wage increases which have occurred since the fall of 1939 have varied considerably among branches of the industry. The greatest absolute increases during this period, 55 and 48 cents, respectively, took place in logging camps and shingle mills; the smallest increase, 27 cents, occurred in plywood mills.

Workers customarily paid on an incentive basis received much greater increases in earnings than did time workers. The earnings of hand fallers and buckers in logging camps, for example, increased by 83 cents on the average, while those of yard pilers in sawmills rose 76 cents and those of shingle sawyers and packers in shingle mills advanced 54 and 53 cents, respectively. The increases in earnings of time workers were on the whole much more moderate, and were markedly uniform within branches. For most of the selected occupations the wage increase was between 25 and 30 cents in plywood mills and between 30 and 40 cents in logging camps and sawmills. In shingle mills 4 of the 8 selected occupations showed increases in earnings ranging from 25 to 35 cents an hour. The marked uniformity in the absolute increases within departments is due very largely to the fact that most wage increases since 1939 have been flat "across-the-board" increases.

Only in few instances did skilled time workers receive appreciably greater absolute increases in earnings than other workers. In sawmills, for example, filers received a much greater increase in earnings than other time workers (49 cents compared to 35 cents or less for most of the other occupations), but head rig sawyers, also one of the most skilled occupations, had the smallest increase in earnings of any of the

<sup>8</sup> These figures are based on detailed occupational wage data collected by the Bureau during the course of Nation-wide surveys of the lumber industry, conducted in 1939 and 1944. The two surveys did not cover the same operations in all cases, but both are believed to be representative of the industry as of the time of the study.

occupations (32 cents). In logging camps loading engineers, head loaders, hook tenders and cat drivers received only slightly higher absolute increases in earnings than chasers, second loaders and choker setters who on the whole are somewhat less-skilled workers.

TABLE 11.—*Straight-Time Average Hourly Earnings of Workers in Selected Occupations in Basic Lumber Industry in Far West, Fall of 1939 and August 1944*

Branch of industry, and occupation	Total number of workers, August 1944	Average hourly earnings		Amount of increase (in cents)	Percent of increase
		August 1944	Fall of 1939		
Total, 46 occupations.....	47, 437	<sup>1</sup> \$1. 24	<sup>1</sup> \$0. 78	46	59.0
Logging camps (15 occupations).....	26, 634	1. 39	. 84	55	66.5
Brakeman, head.....	260	1. 14	. 88	26	29.5
Brakeman, second.....	227	1. 03	. 76	27	35.5
Cat drivers (tractor).....	1, 570	1. 30	. 91	39	42.9
Chasers, high-lead and skidder-side.....	432	1. 12	. 75	37	49.3
Choker setters, cat side.....	2, 881	1. 06	. 71	35	49.3
Engineers, mechanical loading.....	1, 191	1. 30	. 91	39	42.9
Engineers, rail transportation.....	282	1. 20	. 94	26	27.7
Fallers and buckers, hand.....	10, 785	1. 70	. 87	83	95.4
Firemen, rail transportation.....	265	. 99	. 73	26	35.6
Head loaders, mechanical loading.....	1, 049	1. 34	. 96	38	39.6
Hook tenders.....	946	1. 48	1. 09	39	35.8
Scalers, woods.....	619	1. 17	. 84	33	39.3
Second loaders, mechanical loading.....	1, 502	1. 13	. 76	37	48.7
Truck drivers, hauling.....	3, 677	1. 12	. 71	41	57.7
Truck mechanics.....	948	1. 24	. 92	32	34.8
Sawmills (14 occupations).....	17, 694	1. 13	. 72	41	56.9
Car loaders.....	2, 456	1. 15	. 67	48	71.6
Deckmen.....	729	. 96	. 58	38	65.5
Doggers, head rig.....	706	. 96	. 61	35	57.4
Edgermen.....	1, 241	1. 14	. 80	34	42.5
Edger off-bearers.....	877	. 91	. 58	33	56.9
Filers.....	580	1. 62	1. 13	49	43.4
Filers' helpers, floor.....	252	1. 10	. 75	35	46.7
Graders or markers, green chain.....	801	1. 09	. 73	36	49.3
Off-bearers, head rig.....	1, 166	. 95	. 61	34	55.7
Pilers, yard.....	1, 131	1. 57	. 81	76	93.8
Pullers, green chain.....	4, 468	1. 02	. 65	37	56.9
Sawyers, head rig.....	1, 121	1. 50	1. 18	32	27.1
Setters, head rig.....	1, 139	1. 09	. 75	34	45.3
Trimmermen, head mill.....	1, 027	1. 02	. 68	34	50.0
Shingle mills (8 occupations).....	1, 484	1. 45	. 97	48	49.5
Block pilers.....	151	1. 07	. 73	34	46.6
Cut-off saw operators.....	105	1. 35	. 87	48	55.2
Deckmen.....	54	1. 17	. 75	42	56.0
Loaders, car and truck.....	56	1. 02	. 71	31	43.7
Shingle packers.....	485	1. 45	. 92	53	57.6
Shingle sawyers.....	548	1. 71	1. 17	54	46.2
Splitter men.....	19	1. 11	. 83	28	33.7
Tallymen.....	66	1. 08	. 78	30	38.5
Plywood mills (9 occupations)..... <sup>2</sup>	1, 625	1. 02	. 75	27	36.0
Clipper-machine operators.....	110	1. 02	. 76	26	34.2
Glue-spreader catchers.....	207	1. 20	. 96	22	22.4
Glue-spreader feeders.....	124	1. 10	. 78	32	41.0
Pressmen.....	150	1. 10	. 83	27	32.5
Truckers, hand.....	27	. 97	. 69	28	40.6
Veneer driers (feeders and off-bearers).....	629	. 92	. 64	28	43.8
Veneer graders.....	179	. 99	. 72	27	37.5
Veneer lathe helpers.....	127	. 99	. 69	30	43.5
Veneer lathe operators.....	72	1. 25	. 97	28	28.9

<sup>1</sup> In order to insure that the wage level of each branch would be represented in the general average in proportion to its importance in the industry, the averages for each branch which appear in this table were weighted by the total number of workers covered in the branch and not by the actual number in the selected occupations for which figures are presented in this table.

## Employment Resulting From United States Exports, 1939<sup>1</sup>

THE possibility of sustaining high levels of postwar output and employment by means of an expanded volume of exports is attracting an increasing amount of public attention. As an aid to the consideration of this question the Bureau of Labor Statistics undertook a detailed analysis of the employment attributable to exports in 1939, the last year in which the pattern of international trade was not distorted by the war. The results of that analysis are here summarized.

In 1939, when the value of goods exported from the United States was 3.3 billion dollars, some 960,000 persons were employed directly and indirectly in nonagricultural industries in the production of such goods. They constituted about 3.2 percent of all nonagricultural employees in that year. It is expected that by 1950 productivity in the industries primarily concerned with exports will have increased by at least 20 percent above that in 1939; the same volume of exports could, therefore, be produced by 800,000 persons.

### *Export Employment, by Industry Groups*

In some industries, considerably more than 3.2 percent of all employees were engaged in the production of goods for export. Thus, in the nonferrous-metal industries 15 percent of all employment was attributable to exports, and in the ferrous-metal group (iron mines, blast furnaces, steel works, and rolling mills) the figure was 12 percent. On the other hand, the textile and leather industries, with more than 2.5 million employees in 1939, had only 3.1 percent of their workers engaged in the production of export goods, and in the trade and services group, with more than 11 million employees, about 1.3 percent were so engaged. Almost a sixth of all persons engaged in the production of goods for export in 1939 were employed in the metal-fabricating industries, where they accounted for almost 10 percent of total employment. Other industries with substantial numbers of export workers in 1939 were transportation (125,000), trade (110,000), fuel and power (99,000), and motor vehicles, industrial and heating equipment (85,000).

Slightly more than half of the 960,000 export workers in 1939 were engaged directly in the production of export goods. The other half were indirectly required to produce the raw materials, components, and services purchased by other industries for incorporation in goods for export. The ratio of direct to indirect workers varied widely from industry to industry. In the metal-fabricating industries, 80 percent of the export employment was directly required for the production of export goods, and 20 percent for the production of goods purchased by other industries for incorporation in export products. In the trade and service industries, on the other hand, virtually none of the 150,000 export workers were directly required. The ferrous-metal industries were intermediate, with slightly more than half the export workers directly engaged in the production of export goods.

<sup>1</sup> Prepared in the Bureau's Productivity and Technological Development Division by Jerome Cornfield.

*Employment Attributable to Exports From the United States, by Industry Groups, 1939*

Industry group	Number of employees (in thousands) in non-agricultural establishments <sup>1</sup>			
	Total	Dependent upon exports		
		Total	Directly	Indirectly
All groups.....	30,352	902	524	438
Food, tobacco, and kindred products.....	1,321	29	24	5
Ferrous metals.....	483	57	20	28
Motor vehicles, industrial and heating equipment.....	958	85	76	9
Metal fabrication.....	1,567	148	119	29
Nonferrous metals and their products.....	267	39	27	12
Nonmetallic minerals and their products.....	439	21	13	8
Fuel and power.....	1,218	99	65	33
Chemicals.....	427	35	25	11
Lumber, paper, and their products, printing and publishing.....	1,743	65	37	28
Textiles and leather.....	2,512	77	62	15
Rubber.....	150	11	6	6
All other manufacturing.....	430	20	14	5
Construction.....	1,753			
Transportation.....	1,984	125	27	98
Trade.....	6,527	110		110
Business and consumer services.....	4,681	40		40
Government.....	3,891			

<sup>1</sup> Totals do not in all cases add exactly, because of rounding of figures.

These employment figures are an estimate of the amount by which nonagricultural employment would have declined in each industry, if there had been no exports in 1939, but if the volume of consumption, domestic capital formation, government expenditure and imports, as well as the productivity of labor and hours of work, had remained unchanged. In actual fact, a decline in the volume of export trade would involve some decrease in consumption and domestic capital formation as well, but these decreases might be more than offset by the curtailment of imports and the substitution of domestic products.

The above estimates are based upon a detailed study of inter-industry relations in 1939. This study, showing the purchases of each industry from all other industries, provided the basis for calculating the output indirectly required in each industry to produce the export goods. On the basis of these data it was possible to calculate such indirect effects as the purchases of steel required to produce the motor vehicles exported, the coal required to produce steel, and the amount of railroad transportation required to move the autos, steel, and coal. The output directly required was obtained by classifying the 1939 exports by industry of final fabrication. The sum of the output directly and indirectly required in any industry, when compared with the total output of that industry, provided the basis for allocating the total number of workers between production for export and all other production.

Because there is no unique relation between agricultural output and employment, no attempt was made to estimate the number of export workers in agriculture. This does not mean that a decline in the volume of exports would leave agriculture unaffected. Five percent of total agricultural output was directly and indirectly produced for export in 1939. A drop in exports would thus have resulted in a definite shrinkage in agricultural income, even though it might have had no immediate effect on agricultural employment.

## Freedom—How Can We Achieve It?<sup>1</sup>

### *A Means to Peace*

The Nazis, the Fascists, and the Militarists of Japan put the fundamental Rights of Man in issue when they began their war for the subjugation of humanity. Hitler and Mussolini, and the rest openly and shamelessly challenged the right of men to learn, to communicate, and to worship—the right to equal justice, regardless of race, creed, or color—the right to government by the consent of the governed. The outcome of the war is proof again that human rights are more powerful than humanity's oppressors.

Human rights are powerful not only in war but in peace also. They are means as well as ends. It is in the practice of these rights that the best hope for a secure and lasting peace must rest. The Dumbarton Oaks Proposals, which provide that the United Nations Organization shall "promote respect for human rights and fundamental freedoms," recognize this fact.

ARCHIBALD MACLEISH,  
*Assistant Secretary of State.*

### *The Assault on Freedom*

In 1923 Mussolini said: "Fascism has already trampled over the rotten corpse of liberty, and if necessary it will again." The aggressors in this war have suppressed freedom in their own countries and in countries they have occupied.

They have burned books, censored expression, tortured people for their opinions, and established a monopoly over the channels of communication.

They have persecuted men and women for their religious faith and prevented the exercise of religious liberty.

They have taken property without due process of law and violated the privacy of the home.

They have deprived men and women of fair trial and imposed cruel punishments.

They have made a farce of elections and deprived people of their political rights.

They have spread propaganda against human rights throughout the world and attempted to stir up racial and religious prejudices.

Former Secretary of State Hull has pointed out: "We have moved from a careless tolerance of evil institutions to the conviction that free governments and Nazi and Fascist governments cannot exist together in this world because the very nature of the latter requires them to be aggressors and the very nature of free governments too often lays them open to treacherous and well-laid plans of attack."

<sup>1</sup> The fourth and last of a series of Foreign Affairs Outlines, prepared by the Department of State, on the subject of Building the Peace. The three previous Outlines have appeared in the Monthly Labor Review issues of April, May, and June, 1945.

### *The Defense of Freedom*

Nations whose freedom and independence were threatened joined issue with the aggressors. They subscribed to certain principles which they stated in a number of basic documents.

#### ATLANTIC CHARTER

This statement of principles by the President of the United States and the Prime Minister of Great Britain was made a part of the United Nations Declaration. The third of eight points in the Charter reads as follows: "They respect the right of all people to choose the form of government under which they will live; and they wish to see sovereign rights and self-government restored to those who have been forcibly deprived of them."

#### STATEMENT OF THE CRIMEAN CONFERENCE

At Yalta in the Crimea, President Roosevelt, Prime Minister Churchill, and Marshal Stalin made a statement which said in part: "We reaffirm our faith in the principles of the Atlantic Charter, our pledge in the declaration by the United Nations, and our determination to build, in cooperation with other peace-loving nations, world order under law, dedicated to peace, security, freedom and general well-being of all mankind."

Another section of this statement says:

The establishment of order in Europe and the rebuilding of national economic life must be achieved by processes which will enable the liberated peoples to destroy the last vestiges of Nazism and Fascism and to create democratic institutions of their own choice. This is a principle of the Atlantic Charter—the right of all peoples to choose the form of government under which they will live—the restoration of sovereign rights and self-government to those peoples who have been forcibly deprived of them by the aggressor nations.

#### RESOLUTION AT MEXICO CITY

The inter-American conference at Mexico City (February and March 1945) adopted a resolution presented by the United States which urged the American Republics to do four things: (1) Recognize the obligation of democratic governments to assure their people free and impartial access to information; (2) undertake at the end of the war the earliest possible abandonment of wartime censorship; (3) take measures, separately and in cooperation with one another, to promote a free exchange of information among their people; and (4) make every effort, after accepting such a program for themselves, to obtain acceptance of the same principles throughout the world.

### *Record of Progress*

#### IN SUPPORT OF FREEDOM

Free nations of the world have cooperated over the years in various ways to advance the cause of freedom and the spread of knowledge.

*Facilities for the Free Flow of Information*

Certain technical provisions were recognized as essential to the communication of ideas between peoples and nations. As science introduced new methods of rapid communication, international agreements and organizations were needed to make the new facilities serve the world effectively. Three examples will show what has already been done through international action:

1. Communication through the mails. Infinitely complicated problems involved in mailing letters, books, and periodicals all over the world have been worked out through the Universal Postal Union.<sup>2</sup> Uniform rates of postage, methods of exchanging balances due on postage accounts of various nations, and postal regulations in all countries have been cleared through the Postal Union. The flow of expression across borders depends for practical international application on the work of this agency.

2. Communication by radio, telephone, and telegraph. A network of agreements among nations was essential for the orderly utilization of these facilities. The Bureau of the International Telecommunication Union is the agency through which the nations work together on these problems. At the Washington Conference of 1927 over 2,000 recommendations on radio problems were made. The Bureau acts as a clearing house for all information on the subject.

3. Communication based on common terms. The exchange of information—especially scientific research—requires agreement on the meaning of the terms used. Such international agencies as the International Bureau of Weights and Measures<sup>3</sup> have helped people of various countries understand one another by agreements on measurements used in the sciences. The daily lives of the people of the world are directly affected by this type of international collaboration.

## ADVANCING FREE INSTITUTIONS

Over the years the nations have cooperated to build up free institutions and make them work for human welfare. Three examples will show how the principles of freedom have been advanced:

1. Representative government has been strengthened and national parliaments or congresses brought in touch with international affairs by the Interparliamentary Union.<sup>4</sup> The League of Nations used its means to promote and assist free institutions in member nations. Its activities in mandated territories, in the protection of minorities, and in certain plebiscite areas are examples.

2. Exchange of publications has been fostered ever since Alexandre Vattemare, a Frenchman, visited the United States in 1839 to get it started. Through the International Exchange of Publications, mil-

<sup>2</sup> The International Bureau of the Universal Postal Union established in 1874, collects and publishes information, determines costs to be borne by each country in connection with international postal service, and cooperates with international transportation and communication organizations.

<sup>3</sup> This Bureau, established in 1876, conducts scientific investigations for comparison and verifies standards and scales of precision.

<sup>4</sup> The Bureau of the Interparliamentary Union was established in 1888. The central office of the Interparliamentary Union consists of organized groups of members of legislatures. The purpose of the organization is "to unite in common action the members of all parliaments . . . in order to secure the cooperation of their respective States in the firm establishment and the democratic development of the work of international peace and cooperation between nations by means of a universal organization of nations."

lions of government documents, books, and other printed materials have been systematically exchanged among the nations. This program has helped make the knowledge of each country available to others. During the war United Nations Information Offices were established to promote the freer flow of information that would help peoples understand one another.<sup>5</sup> Some countries, including the United States, have opened Information Libraries in foreign centers to make available books, pamphlets, pictures, films, and records—both scholarly and popular—to increase an understanding of their cultures and their contributions to knowledge.

3. Learning and the arts were encouraged through the International Organization for Intellectual Cooperation working under the League of Nations.<sup>6</sup> National committees were created in many countries to work for educational advance, exchange of students and professors, and the effective use of freedom for cultural progress.

### *For Future Consideration*

The representatives at Dumbarton Oaks proposed that the United Nations Organization should "promote respect for human rights and fundamental freedoms." The means for doing this in an organized way were left to the General Assembly and the Economic and Social Council to work out when the Organization is established. Existing and proposed international agencies in this field would be related to the General Organization, and the Economic and Social Council would coordinate their activities.

### ADVANCEMENT OF EDUCATION

The Conference of Allied Ministers of Education meeting in London last year proposed an international education agency to advance the cause of education and culture. Such an educational organization would not be empowered to interfere with educational systems of the member nations, but through it each nation could benefit from the experience and practices of others. The proposed organization could help nations achieve a greater freedom by accelerating the interchange of knowledge and ideas essential to social and economic progress. It could also contribute to peace by helping educational and cultural institutions to increase understanding among nations and peoples.

### DEALING WITH AGGRESSIVE TYRANNIES

The Security Council of the proposed International Organization would have the power to act if it considered that a violent threat to internal freedom was a threat to the peace of the world. "There is no doubt in my mind," Under Secretary of State Grew stated recently, "that the Security Council would act if we were faced again by the kind of situations that arose in Germany and in Italy under Hitler

<sup>5</sup> Nineteen of the United Nations cooperate in an information program, preparing pamphlets, posters, films, studies, press materials, and radio programs. A clearing-house function is performed by offices in the United States and Great Britain.

<sup>6</sup> The Intellectual Cooperation Organization of the League of Nations originated in the second Assembly, 1921, and was organized as one of the four technical organizations of the League in 1926. The Institute of Intellectual Cooperation was formed in Paris to work for cultural advancement with learned professions and institutions in the member countries. Forty-four national committees for intellectual cooperation were created.

and Mussolini before the war. This time we would take action before a war could get started."

#### INTERNATIONAL BILL OF RIGHTS

Leading citizens in several countries have urged that an International Bill of Rights be adopted by the United Nations. Recognizing that liberty cannot be unlimited—that the freedom of one ends where he uses it to interfere with the rights of another—these citizens suggest that certain human rights be accepted as basic to world order.

*Freedom of religion.*—The right to join with others in churches and institutions, and to worship as one believes.

*Freedom of speech.*—The right of the individual to form and hold opinions, to assemble with others to listen, discuss, and speak, being responsible for what he says that may harm others. The right to read as well as the right to express; reasonable access to the media of expression such as print, radio, and films for all who have something to say.

*Fair trial.*—The right to public hearings, to competent counsel, to call witnesses, and to protection against arbitrary detention, cruel or unusual punishments, and loss of life or property without due process of law. Equal protection of the law, regardless of race, religion, sex, or beliefs.

Under Secretary of State Grew has recently commented on the suggested International Bill of Rights: "Perhaps the Assembly [of the United Nations Organization] would adopt a bill of basic human rights; or a treaty might be negotiated, under which the signatory states agree to respect such rights as freedom of speech, of assembly, of the press, of religion. Certainly the American Government will always be in the forefront of any international movement to widen the area of human liberty."

## Wartime Policies

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### Policy on 48-Hour Week in Areas With Cut-Backs

THE War Manpower Commission has instructed its regional directors that after July 1, 1945, areas of labor stringency will continue to be subject to the 48-hour-workweek requirement.<sup>1</sup> In areas of labor balance, the continuance of such a workweek is to be a matter of local option, for determination by the area director after consultation with his management-labor committee.

When war production cut-backs, terminations, or changes occur, the area director must first determine whether the numbers of workers to be released as a result of such changes are sufficiently substantial to warrant the lifting of the 48-hour-workweek designation for the area.

If, notwithstanding the war production changes in the area, the local labor-market situation continues sufficiently stringent to warrant the continuance of the 48-hour workweek, applications by individual plants for a shorter workweek should be decided in the light of the following considerations:

(1) It is not the policy of the War Manpower Commission to administer [the regulation] so as to create unemployment; hence the regulation should not be used to create a balance between labor supply and labor demand which in fact will be an artificial balance because actual substantial unemployment will result;

(2) The decision should be based solely on manpower considerations, and should not, for example, be influenced by reductions in the take-home wages of employees, or reductions in the production costs of the employer;

(3) If a plant, by scheduling and maintaining a workweek of less than 48 hours, will require, within the near future, significant numbers of additional workers, the application should generally be denied;

(4) In the event of a production change which will result in a substantial reduction in a plant's work force, an application \* \* \* should generally be granted unless it is determined that—

(a) Available information reasonably demonstrates that the demand for workers in the other war plants in the area, which justified the retention of the minimum wartime workweek, will be a continuing demand;

(b) The workers who will be laid off if a 48-hour workweek is continued are workers who generally meet the specifications of the orders on file to which an urgency rating has been assigned;

(c) The conditions of employment (plant location, wages, working conditions, etc.) in the plants whose orders have urgency ratings are such that the released workers would not have good cause for refusing to accept work in those plants; and in addition to the foregoing

(d) A major portion of the workers who would be released if a 48-hour workweek is continued will in all probability be reemployed in essential activities.

In case of a plant seeking only a temporary reduction in the workweek, the area director should also give careful consideration to (a) the immediate relative urgency of the need for the workers involved by other war plants in the area, (b) the term of the temporary period,

<sup>1</sup> War Manpower Commission, Field Instruction No. 705, May 29, 1945.

(c) the estimated ability of the WMC to replace dissipated staff if the exemption is not granted, and (d) the urgency of the plant's need in relation to other war plants in the community at the expiration of the temporary period for which exemption is being requested.



## War Labor Board Ruling on Wage or Salary Increases<sup>1</sup>

THE National War Labor Board has ruled that employers who wish to raise wage rates to a point not in excess of 55 cents an hour may do so without obtaining approval of the Board. The former limit for such raises was 50 cents per hour. This change was effected through a revision of the Board's General Order No. 30, which was also amended so as to stipulate that increases between 50 and 55 cents an hour may not "furnish a basis either to increase price ceilings of the commodity or service involved or to resist otherwise justified reductions in such price ceilings." Previously, this restriction was applied to increases above 40 cents an hour.



## Recommendations To Meet Manpower Need - Copper Industry<sup>2</sup>

MEMBERS of the newly formed Copper Labor Advisory Committee have informed the War Production Board that wage adjustments and a 7-day week in the copper mines and refineries would go far to supply the labor force needed to overcome the estimated shortage of 228,000 tons of copper to meet the 1945 requirements.

Chief among the recommendations made by the Copper Labor Advisory Committee for meeting manpower needs and increasing production were the following:

- (1) Increase wages to the levels prevailing in other industries in the area, with a greater increase to the lowest-paid group.
- (2) Work a 7-day week for the period of the emergency.
- (3) Provide recreational facilities in the mining camps.
- (4) Make special allowances for gas and tires for the miners who are living in camps 100 miles or more from the nearest city.
- (5) Revitalize labor-management committees.

The A. F. of L. and C. I. O. members of the committee urged that Government agencies recognize the effects of postwar insecurity on the problem of copper production, explaining that men going to work in the copper mines face the possibility of being isolated in a mining camp with no other work to turn to, if mining is cut down. They urged that postwar prospects and plans be presented to the workers, and suggested that a promise of severance pay or transportation might help to bring new workers to the mines.

<sup>1</sup> National War Labor Board, Press release (B-1836B), May 25, 1944.

<sup>2</sup> War Production Board, Press release 7636, April 3, 1945.

## New Draft Rules<sup>1</sup>

THE need of the armed forces for young men, preferably below 30 years of age, has led Selective Service to request local boards to liberalize occupational deferments for men over 30. The boards have been asked to review cases of registrants in the age group 18 through 25, who have heretofore been rejected for general military service or found qualified for limited service only, and to forward for reexamination those who they have reason to believe may qualify for military service. Local boards have also been informed that no useful purpose would be served by the reexamination of registrants in the age group 18 through 25 who would be deferred under current classification policies, even though physically qualified for military service, and that such registrants should not be forwarded for pre-induction physical examination. Registrants may be forwarded for such examination without changing their present classifications. If after that examination they are found qualified for military service, their cases should immediately be reopened and reconsidered.



## Hours of Work of Prisoners of War<sup>2</sup>

A SHORTAGE of prisoners of war, combined with the increased needs for labor in agriculture and in food-processing plants, caused the War Department to issue new regulations designed to help meet the situation. Prisoners of war are hereafter to work the same number of hours as civilians employed on the same work project, but are not to work more than 12 hours per day, and are not to be kept out of the stockade more than 14 consecutive hours daily. Work tasks, when used, are to be adjusted in accordance with the civilian workday. Contractors are to pay at piece-work rates or for actual hours worked, including overtime rates if applicable. No adjustments are to be made in pay to prisoners because of increase in hours worked.

According to the War Manpower Commission, the War Department plans to hold prisoners of war in this country until the end of the 1945 agricultural season, for contract employment in agriculture and industry, unless before that time the labor-market situation permits their return to Europe.



## Changes in Canadian Manpower Policy<sup>3</sup>

WITH the end of the war in Europe, announcements were made of the removal of certain wartime controls, in keeping with the Canadian Government's promise to eliminate regulations as soon as they were no longer necessary. The manpower controls suspended affected the

<sup>1</sup> National Headquarters Selective Service System, Local Board Memorandum No. 77-E, May 23, 1945, and Press release of May 22, 1945.

<sup>2</sup> Data are from War Manpower Commission, Field Instruction No. 403, May 19, 1945.

<sup>3</sup> Data are from Canada, Labor Gazette (Ottawa), July and August 1943 and April 1945; Wartime Information Board, Facts and Figures Weekly, Nos. 118 and 119 (Ottawa), May 1945; and Globe and Mail (Toronto), May 17 and June 1, 1945.

draft of men for military service, compulsory transfer of men to more essential work, and the selective-service restrictions on women. However, the power to direct men into farm employment, authorized in March of this year, was not affected and was to be retained.

### *Extended Power of Direction to Farm Employment*

A March 1945 amendment to the Canadian National Selective Service Regulations<sup>4</sup> gave authority to selective-service officers to direct any male persons aged 16 to 65 years into agricultural employment. It was hoped that the amendment would help to alleviate the pressing Canadian farm-labor shortage. The effective date of the order (P. C. 1415, March 6, 1945) was March 20, 1945. Agriculture was the fifth type of employment to be covered by such a regulation. Authority had previously been given selective-service officers to direct any male in that age group to a job in fuel-wood cutting, coal mining, fishing, or fish processing (P. C. 4861 and 6077, 1943). Both employed and unemployed persons could be directed to any of these five employments. The specified work must be entered immediately by unemployed persons so directed; if employed, the worker was to report to his new employment at the end of 7 days from the day on which the directing order was issued.

Although the above order was issued before the announcement of victory in Europe, a later statement indicated that the measure would be retained, owing to the continued world shortage of food.

### *Removal of Controls*

On May 7, it was announced that call-ups for military service were suspended and that the troops to be sent to the Pacific war were to consist only of volunteers. National registration, however, which was started in 1940, was still to be in full force, every person 16 years of age and over being required to carry a registration certificate. Registration served a number of other Government purposes, such as locating people for the dependents' allowance board and relatives of those discharged from the armed service.

Later in May, the Minister of Labor announced that no further compulsory transfers of men to highly essential employment would be made under transfer orders issued in 1943. These orders had named a lengthy list of less-essential industries and occupations, and provided that all male workers from 16 to 38 years of age engaged in any of these employments would become liable to transfer to more-essential jobs. Through April 15, 1945, over 100,000 men were registered as coming under the orders, and 18,488 had actually been required to change jobs; in addition, it was probable that a large number of less-essentially occupied workers had changed jobs when the series of orders was first issued. Men already moved were not to be affected by the May 1945 change, and would be required to continue in their jobs. Men directed to employment at a time when they were out of jobs and those directed to the coal-mining industry were also to be required to stay in their current employment. Persons who had been deferred from military service because of work in

<sup>4</sup> For discussion of the regulations as consolidated in January 1943, see *Monthly Labor Review*, April 1943 (p. 673).

essential jobs were also required to remain in their positions, although they no longer had to request periodic renewal of the "postponement," as they were given indefinite extension. The authority to put unemployed men into essential jobs was to be retained, as well as the above-described power to direct men to farm work. Selective service would utilize these controls as circumstances might require.

Most of the selective-service restrictions on women were removed also. Women were no longer required to obtain selective-service permits before taking employment, but they must report new employment within 3 days. Restrictions on advertising for women workers were also removed. The regulations still required women unemployed for 7 days to maintain registration at an employment office, and the 7 days' separation notice was required. Men were not affected by any of these selective-service changes, still being required to have the selective-service permits before looking for jobs.

Attention was called to the fact that, with curtailment of war production and the discharge of personnel from the armed services, selective-service regulations would be administered under changed conditions. The existing placement facilities would be utilized as an employment service for all workers and employers. The Department of Labor would give special attention to the placement of persons discharged from military service and of workers in war plants, and would devote special effort to problems arising from the war migrations of labor.

## Employment Conditions

### WMC Placements in War Production, 1942-44

MORE than 27,000,000 placements in nonagricultural war production and essential supporting activities had been made by the War Manpower Commission up to April 1945, since its creation 3 years earlier.<sup>1</sup> This was equivalent to about 800,000 placements per month.

Hundreds of thousands \* \* \* of jobs in war production have been filled more than once. In hundreds of thousands of cases employees have been transferred from plants engaged in declining or completed production schedules to other plants producing more essential war products. Likewise when men of military age were inducted into the armed services it has been necessary to find replacements in industry for them. The fact is that with this huge total of workers to be provided, and with centers and products of production constantly changing, there has been at no time a critical shortage of manpower in the urgent industries, of more than 200,000.

As the war program got under way in 1942, the WMC was called upon to fill 6,939,620 jobs. In 1943, as many as 9,393,196 placements were made, and in 1944, as the production program approached the peak, the WMC met a demand for 11,446,007 placements. Approximately 14,000,000 men have entered the armed services by induction or voluntary enlistment. About 2,000,000 have since been returned to civil life, and many of these to employment. A large percentage of those entering the services were employed in industry up to the time they put on the uniform. This made it necessary to replace them by workers from less-essential industry, by women not previously at work in industry, and by imported foreign workers.

The War Manpower Commission was created on April 18, 1942, by Executive order, with the following membership: The Administrator of the Federal Security Agency (chairman) and representatives of the War, Navy, Agriculture, and Labor Departments, and of the War Production Board, the Civil Service Commission, the Selective Service System, the Maritime Commission, and the Office of Defense Transportation. The order provided, among other things, that the Chairman, after consultation with other members, should—

Formulate plans and programs and establish basic national policies to assure the most effective mobilization and maximum utilization of the Nation's manpower in the prosecution of the war.

Establish requirements for industry; review all other estimates for military, agricultural, and civilian manpower; and direct the several departments and agencies as to the proper allocation of available manpower.

Establish policies and prescribe regulations governing all Federal programs relating to recruitment, vocational training, and placement of workers to meet the needs of industry and agriculture.

Subsequent amendments to the original Executive order placed the military requirements of manpower under the Selective Service.

<sup>1</sup> Data are from War Manpower Commission, Press releases PM 4796 and 4799, April 19 and May 1, 1945.

System, and the placement of agricultural workers under the War Food Administration.

### *Placements of Veterans*

From January 1, 1942, to January 1, 1945, nonagricultural jobs were found for 1,383,840 veterans by the U. S. Employment Service (which was placed under WMC by Executive order, on September 17, 1942). Of these placements, 220,581 were made in 1942, 357,120 in 1943, and 806,139 in 1944.<sup>2</sup>

The foregoing figures, it was pointed out, included veterans of all wars. In February of 1944, however, a separate analysis was started in order to obtain a month-by-month picture of the number of placements made of World War II veterans.

From February 1944 to the end of March 1945, a total of 775,495 placements of veterans of this war was made by local USES offices. Of such placements made since August 1944, 88,853 were of servicemen with disabilities.

The report under review cited a number of improvements that had been introduced in the USES special service program for veterans, during the last 3 years. These include job counseling, both at the Army's 17 separation centers and in selected local employment offices in each State, and the "selective placement" technique adopted by USES interviewers to facilitate proper placement of handicapped veterans. In addition, much work is being done by interviewers and local veterans' employment representatives, to interest potential employers in the placement of servicemen.<sup>3</sup> USES personnel, who for years before the war were active in working with handicapped civilians, are being called upon by employers to assist in developing or changing job techniques within their plants, so that the work can be performed by disabled servicemen.

Local offices of USES have kept records as to the occupational groups that have absorbed numbers of veteran workers. From October to the end of December 1943, placements of veterans were made in the various groups as follows: Professional and managerial, 2,078; clerical and sales, 6,982; service, 9,832; skilled, 21,254; semi-skilled, 20,899; and unskilled and other, 61,189. In the comparable period October to December 1944, figures showed placements as follows: Professional and managerial, 4,048; clerical and sales, 16,178; service, 21,173; skilled, 37,477; semiskilled, 46,237; and unskilled and other, 118,191.

During January and February of 1945, a total of 184,105 placements of veterans was made, according to the WMC. Of this number, 146,286 involved veterans of the present war, 24,108 of whom had suffered some type of service-connected disability.

<sup>2</sup> For veteran placements, by States, in 1944, see Monthly Labor Review, March 1945 (p. 547).

<sup>3</sup> For various employment aids for veterans, see Monthly Labor Review, March 1945 (p. 546).

## Downgrading Agreement in the Aircraft Industry<sup>1</sup>

A VOLUNTARY agreement providing terms by which employees of 6 southern California aircraft companies, which employ 200,000, may be downgraded, was approved (effective as of April 11, 1945) by the National War Labor Board. The agreement affects those employees of the 6 companies who either are represented by the United Automobile, Aircraft and Agricultural Implement Workers, C.I.O., or by the United Aircraft Welders, Independent, or are not represented by any union. The terms of this understanding, however, are not to be construed so as to supersede or cancel any provisions in the parties' collective-bargaining contracts.

Regarding the matter of downgrading in connection with this voluntary agreement, the National War Labor Board made the following ruling:

1. (a) An employee will be assigned to work which is covered by a job description falling in a lower labor grade, and will receive the classification and rate of pay thereof, only:

(1) For unsatisfactory performance on his present higher-rated job or in the event continued performance on that job would injure his health.

(2) In the event there are changes in production methods or production schedules causing changes in the content of his job.

(3) In the event the employee was not, at the time of his latest classification, properly classified in accordance with the SCAI [Southern California Aircraft Industry] job-classification schedule. However, the employee will be given 10 days' notice of such reclassification if he has been improperly classified for a period of 30 days or more.

(4) In the event of an employee's request for reassignment to an available vacancy if not inconsistent with the contractual rights of another employee and when approved by the employer.

(b) In the case of (a) (2) such reclassification of employees shall be done in accordance with applicable provisions of the collective-bargaining agreement then in effect at that particular plant. In plants where collective-bargaining agreements do not exist, the existing applicable management policies shall govern.

(c) In the case of (a) (1) and (a) (3) such reclassification of employees shall be subject to recourse to the grievance procedure in effect at the plant concerned either by means of individual grievances or by a grievance for the affected group when filed in accordance with the existing labor agreement.

2. (a) When an employee is reclassified to a lower-rated subdivision of the same occupation as provided in number 4, above, he shall receive as his rate of pay on the new job either his current rate of pay or the maximum rate for the lower-rated job, whichever is lower.

(b) When an employee is assigned to work which falls within a different lower-rated occupation, his hourly rate within the rate range of the new job shall be fixed subject to his right to request and to receive a review of his performance on his new job any time after the fourth full week and prior to his next regular review, and to be promptly advised of the result of the review. If such employee believes that the decision reached as the result of this review is unjust, he shall have recourse to the grievance procedure available to him at his plant.

When the management deems it necessary, in the interest of production efficiency, temporarily (for less than 3 months) to assign employees to work on lower-rated jobs, the agreement provides that no change in classification or pay rate shall be effected. "When management deems it necessary to assign employees either temporarily or permanently to lower-rated jobs, management will at the time of change notify the employees of the nature of the change and whether it is temporary or permanent. In the event such temporary assignment exceeds 3 months, said lower-rated job shall be considered a vacancy and be filled accordingly."

<sup>1</sup> National War Labor Board. Press release B-2080, May 7, 1945; Ruling, Case No. 46-237, May 3, 1945.

## Labor Conditions in Copper Mining in Peru, 1939 and 1945<sup>1</sup>

WAGE earners employed in mining operations at 6 principal copper mines in Peru declined in number from 7,153 in 1939 to 5,949 in 1944. In the same period, however, the total number of man-hours rose from 15,129,912 to 15,698,912, average hourly wages increased from 0.43 to 0.60 sol<sup>2</sup> (about 40 percent), and average yearly wages rose from 916 to 1,583 soles (about 73 percent). These advances are largely explained by the increase in the average number of 8-hour shifts per wage earner from 264.4 in 1939 to 329.9 in 1944. Increased numbers of wage earners were employed in milling. The average number of man-shifts worked by wage earners in milling operations rose from 332.5 in 1939 to 371.8 in 1944, but no such change was noted with respect to salaried employees.

### *Employment and Wages*

Employment and labor remuneration at 6 of the principal copper mines in Peru in 1939 and 1944, are shown in table 1.

TABLE 1.—*Employment, Man-Hours Worked, and Wages and Salaries Paid in Mining and Milling Operations of 6 Principal Copper Mines in Peru, 1939 and 1944*

Item	Mining		Milling <sup>1</sup>	
	1944	1939	1944	1939
Wage earners:				
Total number.....	5,949	7,153	490	455
8-hour shifts worked:				
Total.....	1,962,364	1,891,239	182,198	151,305
Average per worker.....	329.9	264.4	371.8	332.5
Total man-hours worked.....	15,698,912	15,129,912	1,457,584	1,210,440
Total amount paid in wages..... soles <sup>2</sup> .....	9,419,028	6,554,847	674,905	366,414
Average wages per year:				
Amount..... do.....	1,583	916	1,377	805
Index (1939=100).....	173	100	171	100
Average hourly wages:				
Amount..... do.....	0.60	0.43	0.46	0.30
Index (1939=100).....	140	100	153	100
Salaried employees:				
Total number.....	284	271	17	11
Total man-hours worked.....	\$ 681,600	\$ 650,400	\$ 47,600	\$ 30,800
Total amount paid in salaries..... do.....	2,703,982	1,684,748	175,809	43,611
Average yearly salary:				
Amount..... do.....	9,521	6,217	10,342	3,965
Index (1939=100).....	153	100	261	100

<sup>1</sup> Milling operations of 5 mines.

<sup>2</sup> Average exchange rate of sol in 1939=18.7 cents, in 1944=15.3 cents.

<sup>3</sup> Calculated on basis of 300 8-hour days per year.

<sup>4</sup> Calculated on basis of 350 8-hour days per year.

Wages at the different mining camps vary considerably, depending on transportation, working and living conditions, character of management, and availability of labor supply. Moreover, in the central

<sup>1</sup> Data are from report (No. 126) prepared by Wm. O. Vanderburg, minerals attaché, United States Embassy, Lima, May 7, 1945.

<sup>2</sup> Average exchange rate of sol in 1939=18.7 cents, in 1944=15.3 cents.

Sierra region, where most of the mining activity is concentrated, the wage scales are determined largely by the rates paid for such labor classifications by the corporation which owns mines Nos. 1 to 4. At some of the mines of this corporation, an incentive-pay plan, called locally the "colectiva" system, is in use. Under this system the workers receive a guaranteed daily wage and in addition a bonus for production above a given quota. Depending on the nature of the assigned task, a group of workers may participate, and if the amount of work set as a minimum quota is exceeded, each worker in the group receives a bonus in proportion to the extra output.

The number of salaried employees increased somewhat in 3 of the 6 mines. In 5 of the mines, increases occurred in average yearly salaries, explained in part, by the greater average number of shifts worked per year. Another factor affecting the average remuneration is that the corporation whose wage level largely determines the wage and salary scales for the copper-mining industry, in 1941, 1942, and 1943, granted to all workers three successive bonuses, each of 10 percent, in addition to their basic pay and a bonus of 10 percent which had been added in 1934—a total bonus of 40 percent on the basic pay. However, three of these bonuses were later replaced by increases in basic pay—20 percent on March 1, 1944, and 10 percent on April 1, 1945—while a bonus of 10 percent on basic pay still remained after the base-pay increase of April 1, 1945, was granted.

Employment, wages, and salaries, at 6 of the principal copper mines in Peru, are given in table 2.

TABLE 2.—*Employment and Average Yearly Earnings at 6 Principal Copper Mines in Peru, 1939 and 1944*

Item	All mines	Mine No. 1	Mine No. 2	Mine No. 3	Mine No. 4	Mine No. 5	Mine No. 6
Wage earners:							
Number:							
1944.....	2,832	736	612	283	1,126	360	5,949
1939.....	2,885	1,054	790	271	1,876	277	7,153
Average yearly wages:							
1944.....soles <sup>1</sup>	1,712	1,845	1,582	1,841	1,067	1,451	-----
1939.....do <sup>1</sup>	1,035	1,525	1,098	1,201	291	809	-----
Salaried employees:							
Number:							
1944.....	136	66	47	21	6	8	284
1939.....	131	88	24	8	9	11	271
Average yearly salaries:							
1944.....soles <sup>1</sup>	7,305	9,517	12,617	12,751	31,666	3,959	-----
1939.....do <sup>1</sup>	6,344	7,397	1,819	13,672	2,198	2,721	-----

<sup>1</sup> Average exchange rate of sol in 1939=18.7 cents, in 1944=15.3 cents.

### *Productivity and Production Costs*

Labor productivity in terms of tonnage per man-hour showed a slight increase with respect to mining operations. In milling, however, there was a slight decrease. At the same time, labor cost advanced in both mining and milling. In terms of the average wage per ton, the increase was 30 percent in mining operations and 63.5 in milling operations. The total labor cost per ton likewise advanced (33.5 percent in mining and 84.3 percent in milling). Table 3 shows labor cost and productivity at 6 of the principal copper mines in Peru, in 1939 and 1944.

TABLE 3.—*Productivity and Labor Costs in Mining and Milling Operations of 6 Principal Copper Mines in Peru, 1939 and 1944*

Item	Mining		Milling <sup>1</sup>	
	1944	1939	1944	1939
Output.....metric tons <sup>2</sup>	1,277,581	1,158,069	656,995	583,528
Total man-hours worked by—				
Wage earners.....	15,698,912	15,129,912	1,457,584	1,210,440
Salaried employees.....	<sup>3</sup> 681,600	<sup>3</sup> 650,400	<sup>4</sup> 47,600	<sup>4</sup> 30,800
Output per man-hour:				
Wage earners.....do	0.081	0.076	0.451	0.482
Wage earners and salaried employees.....do	0.078	0.073	0.436	0.470
Amount paid in—				
Wages.....soles <sup>5</sup>	9,419,028	6,554,847	674,905	366,414
Salaries.....do	2,703,982	1,684,748	175,809	43,611
Wages per ton:				
Amount.....do	7.37	5.66	1.03	0.63
Index (1939=100).....	130	100	164	100
Total labor cost (wage earners and salaried employees) per ton:				
Amount.....do	9.49	7.11	1.29	0.70
Index (1939=100).....	133.5	100.0	184.3	100.0

<sup>1</sup> Milling operations of 5 mines.<sup>2</sup> Metric ton=2,204.6 pounds.<sup>3</sup> Calculated on basis of 300 8-hour days per year.<sup>4</sup> Calculated on basis of 350 8-hour days per year.<sup>5</sup> Average exchange rate of sol in 1939=18.7 cents, in 1944=15.3 cents.

### Comparative Living Costs

A comparison of the prices paid for the principal items of food, clothing, and household articles at a mining corporation's mercantile stores and in the Lima stores and markets, for December 1939 and April 1945, shows that prices were generally higher in Lima than in the corporation's stores. Thus, in 1939, 11 items cost more in the company's stores, 24 cost less, and 4 were the same. In 1945, the corporation's mercantile establishments sold 13 items at a higher price, 28 at a lower figure, and 4 for the same amount as the Lima vendors. The higher cost of food in Lima was, however, offset to some extent by the moderate prices at the popular restaurants operated by the Peruvian Government.

Workers at the principal copper mines also paid lower rents than did industrial workers in Lima. For a 2-room dwelling, the worker at the copper mine paid 3.50 soles, and the industrial worker 30.00 soles, per month. Salaried employees in industry in general paid from 7 to 10 times as much for a 4-room house as did similar employees of copper mines. These differences are brought out in the tabulation below.

	Monthly rent (in soles <sup>1</sup> ) paid by—	
	Copper-mine workers	Industrial workers
Wage earners:		
1-room dwelling.....	—	20.00
2-room dwelling.....	3.50	30.00
Salaried employees:		
3-room dwelling.....	7.50	50.00
4-room dwelling.....	10.00	70.00-100.00

<sup>1</sup> Average exchange rate of sol in 1944=15.3 cents

*Social Security and Other Provisions for Workers*

Peruvian legislation safeguards the workers as to hours of employment, age limitations for underground employment, minimum wages, indemnity for dismissal, vacations with pay, medical assistance, workmen's compensation, and similar items. Working hours are limited to 8 per day or 48 per week for women and minors. Under the Social Security Act, wage earners are insured against sickness, maternity, disability, old age, and death. The necessary funds are raised by means of contributions paid by the employers, the State, and the workers at the rate of  $3\frac{1}{2}$ , 1 and  $1\frac{1}{2}$  percent, respectively, computed on the weekly wages paid.

In addition to his wages, each workman who has worked for 1 employer 260 consecutive working days during a year is entitled to 15 days' vacation with full pay; white-collar workers are entitled to 30 days' vacation. On dismissal from service, wage earners and salaried employees are entitled to indemnity pay which varies according to the capitalization of the company. Thus, workers employed by establishments capitalized at more than 500,000 soles are entitled to indemnity compensation at the rate of 15 days' pay for each year of service, and at the rate of 1 week's pay, if employed by firms capitalized at less than 500,000 soles.

Workers are required to pass a physical examination, including an X-ray for silicosis, before they are hired. Medical and hospital facilities are furnished free of charge to the workmen and their families. Schools, including books and materials, and teaching staff, are furnished free of charge by the mining companies.

Trade-unionism has made little progress in the mining industry, and no unions, it is said, exist among the mine, mill or smelter workers.

## *Postwar Reconstruction*

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### **Canadian Program for Maintaining Employment and Income<sup>1</sup>**

THE Canadian Minister of Reconstruction on April 12, 1945, presented in the House of Commons a White Paper on the Dominion Government's future policies concerning employment and income, accepting public responsibility for maintaining a high level of employment. Under the plan proposed, Canadian economy would continue to be based on private ownership of industry, but Government would assist enterprise to achieve the desired level of employment. The White Paper dealt separately with the transition period following the end of the European war and preceding the victory over Japan (referred to as "stage 2" of the war), and with the postwar period. General unemployment during stage 2 was not anticipated, but displacements would occur locally. Methods for maintaining employment would be planned both for the transition period and for the postwar years; when possible and needed, such programs would be put into effect. On the assumption that export trade had been the greatest dynamic force in influencing the level of employment and income in Canada, stress was laid on expanding export trade over the prewar volume, and credit guaranties to enable other countries to import Canadian goods were recommended. Private investment (with special emphasis on housing), as well as consumption expenditure, would be encouraged under the plan. Public investments, such as public works, would be timed to help maintain employment, but would be intended merely to supplement the workings of the private-enterprise system.

#### *Maintenance of a High and Stable Employment Level*

The Government adopted (as indicated in the White Paper) as a primary object of all Government economic policy, the accomplishment of a "smooth, orderly transition from the economic conditions of war to those of peace" and the maintenance of "a high and stable level of employment and income." Attention was called to the use of the term "high and stable level of employment" instead of "full employment." No lower target was meant, but it was recognized that employment and income both would be subject to fluctuations in the sphere of international trade and to seasonal fluctuations. Estimates of the postwar labor force were based on the 1939 employment total of 3,693,000 and the June 1, 1944, total of 5,016,000 (including

<sup>1</sup> Data are from Employment and Income (Canada, Minister of Reconstruction, Ottawa, April 1945); Facts and Figures Weekly (Wartime Information Board, Ottawa) Nos. 108 and 118, March and May 1945; and reports from Lewis Clark, Counselor of Embassy, and Homer S. Fox, commercial attaché, United States Embassy, Ottawa, April 13 and March 6, 1945.

persons in the armed forces, but excluding women in agriculture). Of the 1944 total, 1,839,000 persons were in positions which were directly connected with the war and would cease with it. On the assumption that some 600,000 workers would be reabsorbed into agriculture, nonagricultural civilian industry, and the student population, and that persons withdrawing from the labor force (such as married women, etc.) would total more than 350,000, it was estimated that employment of less than 900,000 persons over the 1939 total would provide a high level for the population of June 1944. This figure would be increased annually by about 60,000 through the natural population increase.

Such a level of employment was not, however, to be provided by extension of public enterprise; rather, the Government proposed to facilitate and encourage an expansion of private industry. According to the White Paper, the source of employment and income is expenditures, and maintenance of expenditures would be the crux of the Government's employment policy. For purposes of dealing effectively with the problem, expenditures were divided into four groups, according to the channels through which they flow: Export trade, private investment, consumption, and public investment. The Government planned to use appropriate means to influence expenditures in all these channels, emphasizing particularly those which are most susceptible of encouragement and control. Much of the policy consisted of measures already taken, whereas other proposals were still in the planning stage.

### *Transition Period*

In an address on March 5, prior to publication of the White Paper, the Minister of Reconstruction stated that no general unemployment was expected in the transition period following the European victory. He explained that the reduction in war production would probably total 35 percent, but it was expected that civilian production would rise by approximately that amount. However, he stated that a series of local problems would arise from contract cancellations in certain communities where there was abnormal wartime population and a heavy concentration of war orders. The Reconstruction Department's approach in the transition period, according to the Minister, would thus be on a local and regional basis, consisting of preliminary identification of areas of likely unemployment, and encouragement and supplementing of steps taken locally to combat such conditions. The White Paper reiterated this view of the period, stating that the full increase in civilian employment as estimated would not be needed immediately after the end of the European war. Continuing needs of war production, together with the demand for civilian goods both in Canada and abroad, would require all available labor and materials for the country as a whole, including that part of the armed forces and war industry which had been released. However, because of the need for providing for local dislocations and the importance of beginning plans for the postwar period, the Government outlined the following program in the four expenditure fields.

*Export trade.*—As war requirements and relief and reconstruction needs would be high, the problem of the level of exports (other than munitions) would be one of supply and finance; the wartime agencies

would continue to arrange allocation and shipment of products and to deal with financial questions. It was probable that markets for particular products might be adversely affected; the primary producer would be safeguarded in such contingencies by the Agricultural and Fisheries Price Support Acts. Within the limits of the needs engendered by a continuing war, a start was to be made on reestablishing and expanding Canada's nonwar-exports trade. Similarly, Canadian imports and the exporting capacity of other countries were to be built up, to provide payment for Canadian exports. The Government stated that it was prepared to encourage such activity, but that initiative from those industries expecting export markets would be necessary.

*Private investment.*—Wartime barriers to capital and maintenance expenditures would be reduced; the Government would facilitate the most urgent of such expenditures, and, at the same time, would attempt to safeguard against an inflationary boom. Pending postwar reduction of taxes, certain fiscal provisions had been enacted in 1944 to insure that new business investment would not be penalized. The Department of Reconstruction was to see to speedy conversion and expansion of Canadian industries, with special attention to those areas most dependent on war industries. War contracts were to be renegotiated rapidly, and Government-owned plant and equipment not needed for war use disposed of promptly. The Minister of Reconstruction stated that, in the sale of war plants, encouragement was to be given to industries manufacturing goods not previously made in Canada; also stability of employment was to be regarded as more important than high monetary recovery. Special attention would be given to the needs of small industries for rental premises and for materials and equipment, and the desirability of establishing industry in the smaller towns and cities would be considered.

In addition, great importance was attached to housing. Subject to war requirements, the Government planned to encourage and assist in producing material and equipment for not less than 50,000 units, in the first full construction year following victory over Germany. Stage 2 was also to be utilized to carry out surveys, community planning, and research and experiment for postwar housing.

*Consumption.*—Demand for consumer products was expected to exceed supply in stage 2, and continued stabilization controls would be necessary. Therefore, measures to stimulate consumption expenditures would not be appropriate. However, dislocations and declines in income would be prevented from becoming cumulative, and low family incomes would be safeguarded by the Agricultural and Fisheries Price Support Acts, unemployment-insurance benefits, and the family allowances provided for in 1944.

*Public investment.*—Severe limitations on labor and materials would be imposed by the demands of the Pacific war and of the preceding expenditure groups, which were considered more important than public investment. Therefore, the Government emphasized that stage 2 was the time for planning its own deferred public works, and that it would encourage similar planning by Provincial and municipal governments. Also, surveys, mappings, etc., were to be made by the Dominion Government for a program of development and conservation of natural resources. In addition to its planning activities, the Government would, however, undertake its deferred projects in

those localities in which decline of war contracts made available labor for which the locality would probably be able to furnish permanent employment.

### *Postwar Period*

It was recognized that policy for the postwar period was subject to international conditions, and especially to the decisions of the Dominion-Provincial conference which was to take place shortly after the Dominion elections in June.

*Export trade.*—The postwar expansion desirable for Canadian exports was estimated at 1½ billion dollars annually at current prices—60 percent above the prewar level in dollar value, but about 15 percent higher in the amount of goods exported. The White Paper pointed out that such an expansion of exports and the necessary accompanying increase in imports would be dependent on collaboration of the Canadian with other Governments to achieve international security from war; reciprocal reduction and removal of trade barriers; reconversion of war industries in all countries; and reconstitution of multilateral trade. With these objects in mind, the Canadian Government endorsed the Bretton Woods plan for an international monetary fund and an international bank, and had participated in preliminary international discussions on food and raw materials and on cartels. To prevent discriminatory blocs, and to help reestablish countries facing difficult balance-of-payments problems "when Lend-Lease and Mutual Aid come to an end," the Canadian Government would extend credits adequate for other countries to finance their import requirements from Canada; repayment terms would recognize the dependence of such international debt payments on expansion of world trade and ample markets.

*Private investment.*—The Government expected demand for all kinds of goods to be high after the war. Therefore, its efforts to stimulate private investment were to be directed toward keeping down production costs. Postwar taxes were to be reduced<sup>2</sup> and those contributing to a higher level of production cost would be minimized. Low interest rates would be continued. Loans would be available for establishment of small and new enterprises, from the Industrial Development Bank established in 1944; for improvement of farm building and equipment, under the Farm Improvement Loans Act of 1944; and for housing, under the National Housing Act of 1944. Expenditures on housing would also be encouraged by war savings and postwar veterans' credits, and by family allowances.

*Consumption.*—Release of labor and materials would increase consumption expenditures substantially after the war. Continuance of such a level of consumption would depend on maintenance and distribution of incomes. Stage 2 measures to support consumption would continue. The Government planned additional social-security measures, which would depend on agreement with the Provinces as to financial and administrative arrangements. Pensions to veterans and servicemen's dependents would also enlarge expenditures.

*Public investment.*—The Canadian Government did not plan huge expenditures on public works to solve postwar unemployment, but

<sup>2</sup> The first tax reduction occurred in May 1945, following the end of the European War, when excise taxes were lifted from a series of Canadian products.

expected to manage its capital expenditures to contribute to the improvement and stabilization of employment and income. According to the White Paper, "The deliberate use of public investment expenditures as a permanent instrument in employment policy has to be undertaken experimentally." The Government expected to start with advance planning of necessary and desirable Dominion projects, and expenditures on development and conservation of natural resources. The scope of the public-investment program would be enlarged as rapidly as experience in its management was acquired. Again, the policies were contingent on Dominion-Provincial financial arrangements. Development of the Yukon and Northwest Territories and the advancement of civil aviation were also considered fertile fields for public investment.

*Other items.*—Expansion of scientific and industrial research was regarded as of extreme importance and had been encouraged through various steps taken by the Department of Reconstruction. A higher degree of productive efficiency was necessary in order to maintain the desired level of income and a correspondingly high standard of living. Attention was also called to the need for a high degree of mobility of labor between occupations, jobs, and places. The employment offices and placement service established in 1940 would be maintained and expanded. The Government has already authorized 10-year grants to the Provinces of 20 million dollars to provide adequate training facilities and a further grant of 10 million dollars over a 3-year period for physical facilities for vocational training with reference to modern shop equipment. With the postwar disappearance of scarcities, wartime controls would be discontinued, but in the transition period many would still be needed, and certain controls would even aid in the reconstruction.

With regard to financing the White Paper policy, Government expenditures and revenues higher than those before the war would be required, but the Government declared this to be consistent with postwar taxation at substantially lower levels than those of wartime. The Government was prepared to keep the debt in manageable proportions and balanced over a period of years, but would incur deficits when unemployment threatened.



### China's Plans for Postwar Industrialization<sup>1</sup>

THE Supreme National Defense Council of China in December 1944 adopted a resolution outlining plans for industrialization of China as part of the country's general program for economic reconstruction. The Government's aim was rapid industrialization through a planned economy which would include both private and State enterprise. To expedite the process, foreign investment was invited.

Prolonged consideration of industrialization methods preceded recommendation of a combined State- and private-enterprise system. According to the President of the Legislative Yuan, the Chinese authorities rejected full free enterprise as too time-consuming, and cooperative or State operation as requiring social revolution. Industrial development according to the Government's program would pro-

<sup>1</sup> Data are from Pacific Affairs (Institute of Pacific Relations, Orange, Conn.), March 1945, and confidential sources.

ceed under a general plan for economic reconstruction. Establishment of important enterprises by private capital must be approved by the appropriate Government agencies, on the basis of the general plan; similar approval would be required for negotiations by either State or private enterprise for foreign loan or investment. In granting approval, consideration was to be given to location of the projected plant, production capacity, kind and quality of output, issuance of shares and bonds, etc. Private enterprises conforming to the general plan would receive special Government encouragement (e. g., financial aid and transport facilities) to achieve their scheduled programs.

Certain fields were designated in the resolution as Government monopolies; such monopolies included postal service and telecommunications, arsenals, mints, principal railroads, and large-scale hydraulic-power plants. Private capital would be free to engage in any other fields. However, the State might also participate in areas of activity which private capital was not fully capable of developing or which the Government regarded as of special importance (e. g., large-scale petroleum fields, steel plants, and transportation).

In fields not reserved for State monopoly, the Government might operate independently or in cooperation with Chinese or foreign capital. Such State enterprises were to be treated in the same manner as any similar private enterprises, with the same rights and obligations. An enterprise operated by the Government in cooperation with Chinese or foreign capital must be organized in the form of a business corporation; apart from exercising such administrative supervision as was provided by law, the Government would participate in the corporation's management only in its capacity of a shareholder. The object of these provisions was to insure that all firms would compete on a basis of equality, and the Government would have no unfair advantage (such as being permitted to make up deficits from public funds). However, in commenting on the resolution, the President of the Legislative Yuan stated that the Government would not tolerate joint action by private enterprises to raise prices in such a manner that the "public livelihood" would be adversely affected; in such cases State enterprises would be forced to reduce prices in order to counteract high prices and maintain popular consumption.

The plan provided for reduction of restrictions on investment of foreign capital. Foreign investment in both State and private enterprise would be encouraged. All enterprises directly financed and managed by foreign nationals would be subject to Chinese laws. For "certain special enterprises," special franchises would be granted to foreigners upon approval by the Chinese Government.

Persons in the Government service were forbidden to participate in the operation or management of any enterprise which was within the scope of their supervisory function.

In issuing the resolution, it was stated that existing laws and regulations would inevitably conflict with the principles outlined. Such laws were to be referred to the Legislative Yuan for revision, with a view to harmonizing all existing legislation on the subject.

## Measures to Meet Postwar Labor Conditions in Egypt<sup>1</sup>

THE Egyptian Government has recently taken action regarding problems that may follow the end of wartime activities in that country. Offices have been created to assist the unemployed, the postwar-program committee has been granted operating funds, a movement to provide social insurance is under way, the Advisory Labor Council has been reconstituted, and other action indicates an interest in the development of cooperatives.

### *Employment Problems and Placement Service*

About 8,000 unskilled laborers had been released by the Allied armies in Egypt up to March 28, 1945. Total employment by the British and United States armies has been variously estimated at numbers ranging from 200,000 to 500,000. Records of employment of unskilled workers are difficult to obtain, because such labor is usually hired and paid off by the day. It is believed that unskilled workers will return to agriculture when wartime activities end, and the main concern is to provide employment for skilled labor. The British and United States forces are reported to have employed about 60,000 workers in this category.

In an attempt to meet this problem, the Egyptian Ministry of Social Affairs issued a decree on March 20, 1945, establishing in the Department of Labor a labor registry office for commercial and industrial employment and subsidiary offices in designated industrial centers in Egypt. Applicants for employment are to fill out special forms at the offices. Employers may request the offices to procure workers for them but, in case of vacancies caused by strike or other work stoppage, the employer must indicate in writing the cause of the strike or stoppage.

*Distribution of labor force.*—Industrial workers made up about one-tenth and agricultural workers about four-sevenths of the gainfully occupied population of Egypt in 1937. According to the census of that year, the total number of employed and the numbers in various types of employment were as follows:

	<i>Number of workers</i>		<i>Number of workers</i>
Total.....	7, 422, 185	Commerce.....	460, 075
Agriculture, etc.....	4, 308, 201	Public service.....	170, 756
Mining and quarrying.....	10, 828	Professions.....	151, 207
Manufacturing.....	478, 199	Services, including domestic service.....	256, 099
Transportation, etc.....	138, 911	Miscellaneous.....	1, 327, 203
Construction of buildings..	120, 706		

Since the year of the census, the increase in employment under war needs appears to have been considerable. In March 1944, the Government provided for conclusive data by authorizing a census of industrial production every 3 years, but results of that census are not

<sup>1</sup> Data are from United States Legation, Cairo, reports of K. L. Rankin, commercial attaché, April 19, 1944, and Ruth C. Sloan, economic analyst, April 3, 1945; and Population Census of Egypt, 1937 (Ministry of Finance, Statistical and Census Department), Cairo, 1942.

yet available. The organization of labor unions, legalized in 1942, has also strengthened the position of labor.

*Study of postwar employment problems.*—An Anglo-Egyptian committee was formed in August 1944 for the purpose of studying postwar employment. Its recommendations stress the encouragement of local industry and the reinforcement of industries which developed during the war, the need for beginning work on public projects such as roads and bridges, and especially the provision of permanent work for discharged skilled workers so that their experience may not be lost. Under present arrangements, Egyptian authorities are to be notified of the release of Egyptian workers. In the current budget, the sum of about £500,000 is to be earmarked for the development of public projects (including bridge building, road construction, and irrigation systems).

An Egyptian Research and Planning Association, composed of Egyptian scientists, Government officials, and professional men, including prominent Egyptians in London, is also active in postwar planning for the nation.

### *Social Insurance*

In the spring of 1945, a draft law prepared by the Ministry of Social Affairs was under consideration, which would provide compulsory insurance against sickness, invalidity, old age, and death. Under existing law, industrial-accident insurance, medical first aid on the work premises, certain other medical assistance, half wages during a limited period of proved sickness, and maternity leave for women have been provided.<sup>2</sup> The draft law would broaden these benefits, although not sufficiently broad to cover most governmental, agricultural, domestic, or temporary workers, or workers in establishments employing fewer than five persons. Under it free medical treatment, including medicines, cash benefits in cases of sickness and invalidity, old-age pensions, and funeral grants and cash benefits for dependents of the deceased, would be provided. Contributions would be made, under the plan, by employers, employees, and the Government.

### *Advisory Labor Council*

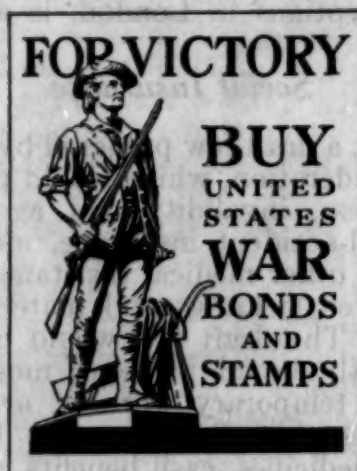
An Advisory Labor Council, which had been in existence from 1932 to 1937, was reconstituted by the Egyptian Cabinet on January 20, 1945. According to a ministerial resolution of that date, the functions of the Council are to help the Government in preparing labor laws and in handling labor matters and improving conditions for workers. The Council is to consist of 15 ex-officio members (officials from the Cabinet and other Government offices); 8 members named by the Council of Ministers on the recommendation of the Minister of Social Affairs; and 5 members named by the Minister of Social Affairs (2 to represent employees of commercial establishments, and 3 from among industrial workers). Members appointed by the Council of Ministers are to hold office for 2 years, with the option of renewal of appoint-

<sup>2</sup> For details, see *Monthly Labor Review*, November 1933 (p. 1136) and October 1944 (p. 810).

ment for 2 years. The term of office for members named by the Minister of Social Affairs—the labor members—was to be fixed in the notice of nomination.

### *Encouragement of Cooperatives*

A comprehensive law on cooperative associations, which provided for a superior council, was published on August 24, 1944. The Ministry of Social Affairs recently designated the members of the Council and decided to send a mission to England to study control of and legislation for cooperatives in that country.



## Discharged Soldiers

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### Directives on Reemployment of Veterans

THE increasing number of separations from the armed services, together with the employment situation arising from war production cut-backs, has led Federal agencies to establish policies designed to aid returning veterans in their search for a job.

#### *Recruitment of Veterans*

*WMC recruitment methods for veterans.*<sup>1</sup>—To make more jobs available to qualified veteran applicants reentering the labor market or unemployed as the result of war production cut-backs, a relaxation of interoffice recruitment methods—as they apply to veterans—is being put into effect by local offices of the U. S. Employment Service. Under the new procedure, USES will accept and process, for interoffice recruitment, job orders from employers who specify they wish to employ veterans, even though such employers may be engaged in work of a less-essential nature than was formerly demanded as a requirement. However, no order will be accepted for interoffice recruitment if qualified veterans or nonveterans are available in the local labor market.

The relaxation, applicable to veterans only, will result in the following changes in present interoffice recruitment standards: (1) The employer's order need not warrant the assignment of a manpower priority rating; (2) because the employer need not be engaged in war production, in order to hire veterans, and the veteran may take a non-war job if he prefers, the local employment office will be free to clear such orders in any community where veterans may be available; (3) when a request for fewer than 10 workers is involved, the employer does not have to send a hiring representative or subscribe to advertising at recruitment points; and (4) although employers will be urged to provide transportation, strict adherence to this standard will not be required.

Arrangements are being made with employers to insure that action will be taken on application within 24 hours after receipt by the employer. This policy is adopted so that there will be a minimum time lapse, and veterans will not lose other opportunities for employment if suitable jobs are not immediately available in their own communities. This procedure will also reduce needless travel by veterans in search of a job in other areas.

<sup>1</sup> War Manpower Commission, Press release (PM-4829), May 31, 1945.

### *Reinstatement of Veterans*

*Department of Justice policy in "superseniority" claims.*—In order to facilitate the formulation of and adherence to a uniform policy for handling cases involving reinstatement of veterans, the Department of Justice has instructed U. S. Attorneys to refer promptly to the Department any doubtful question before instituting or refusing to institute an action on behalf of the veteran.<sup>2</sup>

In situations involving reduction in force, an employer may be able to reinstate a veteran only by dismissing a nonveteran with greater seniority.

The Selective Service System and others maintain that Section 8 required actual restoration to the former job, regardless of relative seniority, even if such restoration necessitates such dismissal. The Department will represent veterans asserting such "superseniority" restoration claims. Moreover, we will present to the courts the corollary proposition that, in the event of lay-offs, within the 1-year period following restoration, the veteran is entitled to retain his position even if it results in the lay-off of a nonveteran with greater seniority. (This approach amounts to a contention that a veteran is entitled to job restoration and retention regardless of seniority, as long as the work is being done by any nonveteran.) However, since the "superseniority" interpretation is not free from doubt under the act, the Department will expect to present the issue to the courts with full candor. Any briefs submitted will disclose the considerations and the legislative history both pro and con. The duty of the U. S. Attorney is not only to represent the veteran, as provided by the statute, but acting as an officer of the court, to present to the court whatever may be useful in helping the court arrive at a proper construction of the statute.

The Department directs that any veteran seeking representation in asserting a superseniority claim should be informed of the fact that his case will be presented in this manner, so that he may retain private counsel should he prefer to do so.

*WLB ruling on veterans' reinstatement rights.*<sup>3</sup>—The National War Labor Board affirmed a directive order of one of its regional boards that a veteran is entitled to reinstatement and to all automatic length-of-service wage increases granted in his absence to which he would have been entitled had he been continuously employed. The regional board unanimously ordered that—

Any employee who, during the war, is drafted or volunteers for service in the military forces of the United States shall, upon honorable discharge and upon meeting all other requirements of the Selective Service Act, be entitled to reinstatement in his former position or to a position of like seniority, status, and pay including all increases granted during his absence to which he would have been entitled had he been continuously employed. This clause is intended to be in full conformance with the provisions of the Selective Service Act and is subject to any modification which may become necessary by amendment of pertinent sections of the Selective Service Act. \* \* \*

The National War Labor Board has previously stated (Release B-1834A) that the automatic length-of-service increases to which a veteran returning to his job is entitled do not include promotions from one job grade to another calling for greater or different skill, or to the operation of a bona fide apprentice or trainee program under which advancement is governed by considerations of skill and ability as well as length of service.

<sup>2</sup> Department of Justice, Circular No. 3851, Supplement No. 3, May 10, 1945.

<sup>3</sup> National War Labor Board, Press release B-1834B, March 7, 1945.

## Social Security

### Belgian Social Security Acts, 1944-45<sup>1</sup>

#### Summary

A COMPREHENSIVE social-insurance system, extending and broadening the benefits of previous legislation, was embodied in three decree laws bearing the dates December 28, 1944, January 10, 1945, and February 7, 1945. All wage earners and salaried employees under verbal or written contract, with the exception of personnel of the National Society of Belgian Railways (who enjoy comparable benefits separately), are included in the scheme. General wage earners are covered by the law of December 28, 1944. Provision is made for special classes of labor in the law for mine workers of January 10, 1945, and in the law for seamen of the merchant marine of February 7, 1945.

All three acts provide for (1) an increase in old-age and survivors' pensions and family allowances, (2) establishment of sickness and invalidity insurance on a compulsory basis, (3) temporary insurance for the unemployed, pending establishment of further legislation, and (4) an improved and generalized system of paid vacations.

Financial contributions amount to 23.5 percent of wages, excluding that part in excess of 3,000 francs per month, for general workers and employees; 25.5 percent of wages, without specified limit of pay, is deducted for miners; and the same percentage, with a 4,000-franc monthly limit, for merchant seamen. Employers contribute an amount equal to from 15.25 to 17.5 percent of wages, and workers pay from 8 to 9 percent of wages, both under the specified pay limit. In certain cases Government subsidies are provided. Administration of the general system is based on the principle of cooperation by existing mutual-aid and workers' organizations with a National Office of Social Security created by the law of December 28, 1944. Although the acts were formally effective January 1, 1945, application of certain provisions was delayed. The acts were considered as basic laws and depended on the publication of regulatory decrees.

#### General System

**Coverage.**—The decree law of December 28 applies to all persons employed under written or verbal contract,<sup>2</sup> with the exception of miners and merchant seamen. The personnel of the National Society of Belgian Railways is also excluded except when benefits enjoyed by

<sup>1</sup> Data are from *Moniteur Belge* (Brussels), December 30, 1944; February 1, 4, 17, March 1, 25, 28, 1945 reports of Leigh W. Hunt, commercial attaché, and Smith Simpson, labor attaché, Brussels, dated January 30 and April 3, 1945.

<sup>2</sup> An act of August 7, 1922, concerning employment contracts, provides that all task work must be done under written contract, although time work may be by verbal contract.

any members of this group are not at least equal to those provided by the general law. Application of the law to special classes of labor (such as agricultural workers, domestic workers, persons paid wholly or partly by tips, fishermen, persons employed in inland navigation, family-enterprise workers, apprentices, etc.) is delayed owing to the necessity for adapting the basic law to the individual requirement of each of these occupations. The immediate coverage of the law is estimated as 1,200,000.

*Contributions.*—The system is financed by contributions equal to 23.5 percent of wages, excluding any part of pay over 3,000 francs a month. Wage earners pay 8 percent of their wages, and salaried employees 8.25 percent in pay-roll deduction. The remainder is paid by the employers, who are responsible for the transfer of the contributions to the Office of Social Security each quarter of the year. Provision is made for Government subsidies to the unemployment fund and to the mutual-benefit societies which cooperate in the administration of the insurance. Distribution of the quotas is shown below.

*Contributions to Social-Insurance Funds in Belgium, 1945*<sup>1</sup>

Type of benefit	Percent of wages or salaries					
	Wage earners			Salaried workers		
	Total	Wage earner	Em- ployer	Total	Salaried worker	Em- ployer
All types.....	23.50	8.00	15.50	23.50	8.25	15.25
Old-age and survivors' pensions.....	7.00	3.50	3.50	10.50	4.50	6.00
Sickness and invalidity benefits.....	6.00	3.50	2.50	5.00	2.75	2.25
Provisional unemployment benefits.....	2.00	1.00	1.00	2.00	1.00	1.00
Family allowances.....	6.00	6.00	6.00	6.00	6.00	6.00
Paid vacations.....	2.50	2.50	2.50	2.50	2.50	2.50

<sup>1</sup> These percentages may be changed by royal decree on the recommendation of the competent control commission.

*Benefits.*—Decrees issued after the decree law of December 28, 1944, provided specific benefits for each type of insurance. Decrees of the Regent, dated January 30 and February 5, 1945, increased old-age and survivors' pensions by instituting complementary pensions for persons in specified categories, and by raising old-age, survivors', and invalids' pensions by 50 percent and orphans' pensions by 100 percent, to offset higher living costs.

A decree of March 21, 1945, concerning compulsory sickness and invalidity insurance provided for the insured person and his family such health services as examinations, diagnoses, and treatment of specified ailments. A part of the cost of special medical services is borne by the insured. When incapacitated for work by illness or invalidity, the insured receives 60 percent of lost pay for a period of up to 300 days, and 50 percent thereafter. Maternity allotments are 60 percent of pay for 6 weeks preceding and 6 weeks after childbirth.

By a decree of December 29, 1944, the rate of family allowances for wage earners was increased to 115 francs a month each for the first and second child, 160 francs for the third child, 210 francs for the fourth child, and 300 francs for the fifth and subsequent children.

A report by the Minister of Labor, accompanying the decree law of December 28, 1944, estimated that unemployment benefits would

equal 50 percent of the workers' pay if the Government were to contribute as much to the unemployment fund as did worker and employer together (2 percent).

*Administration.*—A National Office of Social Security was created in the Ministry of Labor and Social Security by the decree law of December 28, 1944, implemented by the Regent's decree of January 16, 1945. It is managed by a general administrator named by the King and by a management committee composed of 6 members chosen by royal appointment in equal number from candidates presented by the principal associations of workers and of employers. Much of the work of the Office is to be carried on by commissions selected in like manner, to represent the following insured classes: (1) Workers in general, (2) harbor workers and ship repairers, (3) diamond cutters, (4) clerical workers, (5) agricultural workers, domestic workers, home workers, persons paid partly or wholly in tips, fishermen, family-enterprise workers, and apprentices, and (6) other workers who may be included in the scope of the law.

The National Office of Social Security is responsible for the collection of all funds, and is to keep separate accounts for each group cited above. The employer is required to transfer the sums deducted from wages, together with his own contributions,<sup>3</sup> to the Office each quarter, and to furnish the employee with a social-security card bearing the necessary information regarding his social-security status. Penalties are provided for nonobservance of these provisions. After deduction of the administrative expenses, the insurance funds are credited to the several national agencies (funds) which supervise their distribution. Allocation is made in the following proportions:

		Wage earners	Salaried employees
Old-age and survivors' pensions.....	Percent..	29. 8	44. 7
Sickness and invalidity benefits.....	do.....	25. 5	21. 3
Unemployment-relief payments.....	do.....	8. 5	8. 5
Family allowances.....	do.....	25. 5	25. 5
Annual holidays with pay.....	do.....	10. 7	----

The sums destined for old-age and survivors' benefits are credited to the National Fund for Increasing Old-Age and Survivors' Pensions, after discount has been made for the portion retained by the employer, and distributed according to previous pension laws.

Family allowances are distributed as before by the National Family Allowance Fund.

Compulsory sickness and invalidity benefits are granted by recognized mutual-aid organizations or through regional offices of sickness and invalidity insurance instituted by royal decrees. The National Fund of Sickness and Invalidity Insurance, administered by a joint committee, receives and distributes to disbursing agencies the funds allotted to it. This fund also receives part of the sickness and invalidity contributions of mine workers.

Unemployment benefits<sup>4</sup> are administered through a Provisional Fund of Aid to the Involuntarily Unemployed, which is established in the Ministry of Labor and Social Security. It receives the contributions of all workers, including miners and merchant seamen.

<sup>3</sup> The employer is authorized to withhold an amount equal to the contributions paid by him under pre-existing old-age pension laws.

<sup>4</sup> The unemployment-insurance clauses of the legislation here dealt with are considered a transitional step (from the earlier system) to national compulsory unemployment insurance.

A joint committee of workers' and employers' representatives takes part in the operation of the Fund. Distribution of benefits is made through authorized workers' organizations under conditions fixed by royal decree, by local governments (communes), or by an agency created for that specific purpose. Local governments share responsibility for verifying the status of the unemployed, and are held liable for the granting of undue payments. The operation of fee-charging employment offices is prohibited, although certain such agencies may be authorized to continue temporarily. The Minister of Labor stated, in his report accompanying the law, that the Provisional Fund of Aid to the Involuntarily Unemployed would also be charged with the administration of free public employment agencies and with measures aimed at retaining workers.

### *Miners' System*

*Coverage.*—The coverage of the law is not specified in the decree law of January 10, 1945. Earlier legislation applied to all wage earners in mining enterprises, with few exceptions.

*Contributions.*—A sum equal to 25.5 percent of the wage of each worker is transferred each quarter by the employer to the National Miners' Pension Fund. Workers contribute 8 percent of pay without specified limit, and employers 17.5 percent. The necessity of other resources is foreseen by the law, in view of the 55-year retirement age.

*Benefits.*—After the deduction of administrative expenses, the insurance is allocated as follows: 9 percent for old-age and survivors' pensions; 6 percent for sickness and invalidity insurance; 6 percent for family allowances; 2.5 percent for annual vacations; and 2 percent for the Provisional Fund of Aid to the Involuntarily Unemployed. With the exception of old-age insurance, the benefits extended by the miners' insurance system closely resemble those granted by the general insurance law of December 28, 1944.

*Administration.*—The National Miners' Pension Fund performs many of the functions fulfilled by the Office of Social Security in the general social security law. It continues to administer retirement pensions and is responsible for managing part of the sickness-invalidity insurance and for the paid-vacation provisions of the law. It also distributes unemployment benefits and family allowances. Insurance contributions are received monthly from employers.

### *Merchant Seamen's System*

*Coverage.*—Insurance is compulsory for all persons bound by a labor contract and enrolled in the general registry of merchant seamen, and for all persons who contract to perform a task aboard ship, whether or not recruited to take part in a voyage.

*Contributions.*—All pay, excluding any amount exceeding 4,000 francs a month, is subject to a deduction of 9 percent for social-insurance purposes. The employer contributes an amount equal to 16.5 percent on all wages below 4,000 francs a month. The total, equal to 25.5 percent of wages up to 4,000 francs, is payable quarterly to the National Office of Seamen's Social Security. The Government subsidizes this office with an amount equal to 5 percent of wages as previously defined, to be allocated to old-age and survivors' pensions.

*Benefits.*—The funds of the National Office of Seamen's Social Security are allocated thus: 15 percent for old-age and survivors' pensions, 6 percent for family allowances, 5 percent for sickness and invalidity insurance, 2.5 percent for annual vacations, and 2 percent for the Provisional Fund of Aid to the Involuntarily Unemployed. All these percentages may be modified by royal decree. Old-age and survivors' pensions and family allowances are increased, the latter to the level of those of workers in general. Sickness and invalidity insurance is extended to the families of seamen. Unemployment benefits are the same as for workers in general, but a royal decree may adapt this insurance to special conditions affecting seamen.

*Administration.*—The National Office of Seamen's Social Security functions under the Ministry of Communications. It is managed by a joint committee representing workers and employers. The pre-existing Relief and Provident Fund is made responsible for the payment of increased old-age and survivors' pensions and other benefits. The arrangement made for the administration of unemployment insurance by the National Fund of Aid to the Involuntarily Unemployed may be discontinued whenever a separate seamen's unemployment system is instituted.



## Guaranteed Weekly Pay for British Building Labor<sup>1</sup>

A WEEKLY minimum of 32 hours' pay was in effect guaranteed for building-construction operatives under an amendment to the working rules of the British National Joint Council for the Building Industry, decided upon at the Council's annual meeting, on March 27, 1945. The operation of the plan is intended not to supersede the provisions of the unemployment-insurance system but to supplement them.

The amendment applied to the rules covering time lost from work owing to inclement weather. It provided for continuance during peacetime of a constructive feature of the Essential Work (Building and Civil Engineering) Order of 1941, prescribing payment of a guaranteed minimum time wage for employees for every week in which they were capable of working and available for any work that they might reasonably be asked to perform.

Although the program is significant, the industrial coverage will not be inclusive, as the workers whose wages and conditions of employment are fixed by the National Joint Council are a minority of those engaged in building construction. The council, which includes workmen as well as employers, was formed by the National Federation of Building Trades Employers (and allied organizations of plumber and slater employers) and the National Federation of Building Trades Operatives.

To qualify for the 32 hours of guaranteed pay the operative must meet a number of specified requirements in addition to being available for work in his own occupation during normal hours (i. e., 7½, 8, or 8½ hours Monday through Friday, and 4 hours on Saturday). He must also be ready and willing to perform work in any other building-industry occupation of which he is capable or at any other site or shop where work is available. If abnormal weather conditions interrupt

<sup>1</sup> Information is from report (No. 199) prepared by E. M. Hodgkinson, United States Embassy at London, dated April 24, 1945.

work over a period, the employer may make suitable arrangements to have the workers register or show their availability each day.

An operative who performs actual work in any pay week, is available for work throughout the normal working hours, and has fulfilled the other foregoing requirements but, because of inclement weather, is prevented from working, shall receive payment (at his current hourly rate) for half of the time thus lost from work. His total week's pay in such a week may not be less than 32 times his hourly wage rate.

For the first full week of inclement weather following a week in which some work has been performed, the worker is entitled to receive the guaranteed minimum pay for 32 hours. For the second and succeeding full week or weeks of such weather, however, he is not entitled to any payment under the agreement, but must register for unemployment benefit.

Time lost because of sickness or other causes beyond the worker's control, or because of an agreement for vacations with pay, is excluded from the calculations for guaranteed weekly minimum pay. An employee who fails to be available for work during any part of the normal working hours (except for the above reasons) forfeits his right to any payment for inclement weather covering the hours in that day and his right to guaranteed weekly minimum pay for the pay week in which that day occurs.

An increase or decrease in pay that comes into operation on a day other than the first day of a pay week may not be calculated in the guaranteed weekly minimum until the first day of the succeeding pay week.

During the first 6 working days of employment, termination of service by either the employer or the employee must be preceded by 2 hours' notice, such notice expiring at the end of the normal work-day. Otherwise the expiration of 2 hours' notice shall be at the normal closing time on Fridays. These provisions do not prevent the employer from transferring workers, from hiring persons by the hour, from summarily discharging operatives for misconduct, or from terminating a particular operation for which an operative has been employed on the instructions of a recognized competent authority, on 2 hours' notice expiring at the end of any day.

### Unemployment Compensation in Meat-Packing Industry in Uruguay<sup>1</sup>

A COMPENSATION fund for unemployment in the meat-packing industry in Uruguay was created by the law of December 12, 1944. A guaranty of 100 hours of work per month is provided by stipulating that compensation shall be paid for any hours under 100 not worked. A labor exchange is to be organized by the Fund and workers are forbidden to refuse employment except for just cause. The Fund, *Caja de Compensaciones por Desocupación en la Industria Frigorífico*, is to be governed by a council, including Government officials and

<sup>1</sup> Data are from report of John T. Fishburn, senior economic analyst, United States Embassy, Montevideo, February 5, 1945, enclosing copy of decree of December 12, 1944.

two worker and two employer representatives. Resources for benefit payments are to come from certain import, export, and cattle taxes, and from a 6½-percent pay-roll tax and a 2-percent wage tax effective November 1, 1944. The President of Uruguay is given authority to combine the existing Family Compensation Fund of the meat-packing industry with the new Fund without interfering with either service. The law invalidates and replaces that of December 26, 1941,<sup>2</sup> under which 100 hours of work were guaranteed during 3 slack months.

### *Workers Covered by Fund*

Workers whose names have been on the pay rolls of any of four specified meat-packing companies (and similar companies which may be formed) for certain periods of time may claim compensation from the Fund. Since it is reported that names are retained on pay rolls during slack seasons, the new law apparently covers all but purely seasonal workers. For this reason and because of the monthly guaranty the law improves the situation prevailing under the decree of December 26, 1941. Actual coverage may include a considerable body of the estimated 24,000 workers employed in the food industry on December 31, 1944.

### *Eligibility for Benefits*

A worker is eligible for unemployment-compensation payments if, at the time of his application, he has been on the pay roll 12 months out of the last 18 months, or 18 months out of the last 36 (provided at least 8 of these months were during the last 12), or 24 months out of the last 48 (provided at least 6 of these months were during the last 12), or 6 months out of the last 12 months (in which case the payment amounts to only 60 percent of the amount assigned by the scale).

The Fund is to make its own regulations regarding the eligibility of workers who, although normally on the packing-company pay rolls, are in the employ of third parties. The penalty for a false statement is to be suspension from the register for 6 months and, for another offense, elimination from it.

### *Benefits Provided*

A minimum of 100 hours of paid work per month is guaranteed by the law. Eligible workers who work less than 100 hours are to receive payment from the Fund for the hours not worked, as follows:

Regular hourly earnings (in centésimos<sup>1</sup>):

Compensation

Under 30-----	Full regular pay.
30 and under 60 -----	30 centésimos, plus 70 percent of difference between that amount and regular earnings.
60 and under 90-----	60 centésimos, plus 40 percent of difference between that amount and regular earnings.
90 and over-----	90 centésimos, plus 20 percent of difference between that amount and regular earnings.

<sup>1</sup> A average exchange rate of peso (100 centésimos) in December 1944—controlled, 65.8 cents; free, 54.2 cents.

<sup>2</sup> See Labor Conditions in Latin America, No. 12 (BLS Serial No. R. 1467). Regulatory decrees were issued on January 23 and July 2, 1943.

For workers paid by the job, the unemployment-compensation rate is to be based on the hourly average earned in the last 6 months in which they worked the legal minimum number of hours. For those paid irregular daily rates, compensation is to be based upon average hourly earnings during the same period.

Workers may not refuse work offered by the companies without just cause, and they must give normal value in their work. If because of lack of regular work, persons are employed during the 100 hours at work in which they earn less than their usual rates, the Fund is to pay the difference.

All benefit payments under the unemployment-compensation law are to be unattachable.

### *Financial Resources of the Fund*

The Fund for unemployment compensation is to operate on income derived from (1) the export and import taxes which would normally be paid by the packing industry, less 35 percent to be retained by the companies, effective January 1, 1945; (2) a 6½-percent pay-roll tax and a 2-percent wage tax, which the employer is to retain and pay to the Bank of the Republic, effective November 1, 1944; (3) a tax paid by the seller, amounting to 0.001 centésimo per kilogram of weight on the hoof, on all cattle, sheep, and swine bought in the national livestock market, effective on the day the law was published; and (4) all fines levied for noncompliance with the terms of the law.

Measures for setting the new Fund in motion include the provision of a credit of 250,000 pesos from the Bank of the Republic, repayable, without interest, from receipts of the Fund.

### *Employment Exchanges*

The Fund is to organize an employment exchange, which will maintain registers made up from personnel lists supplied by the meat-packing enterprises. The lists must be in duplicate and show separately the names of workers whose service meets the requirements for full eligibility. Workers' committees are to be given an opportunity to examine the lists, before definitive registers are established for each company. The employment exchange for the Capital area will operate as a part of the Fund offices there, and provision is made for establishing local offices in the interior.

When in need of help, the employer must call workers who are on his own list as eligible for benefits, or, if his list is exhausted, from other such lists in the same locality, before employing other workers. A company is to be permitted to hire apprentices under 18 years of age, provided the action is in conformity with relevant law and the number of apprentices does not exceed 2 percent of the personnel on the employer's register.

A person who, without legitimate cause, refuses or fails to present himself for work offered under the provisions drawn up for the employment exchanges is to be suspended from the register for 2 months for the first offense, 4 months for the second, 6 months for the third, and permanently for another offense. Penalties are also provided for noncompliance by the meat-packing companies.

# Industrial Injuries

## Fatal Work Injuries in Shipyards, 1943 and 1944<sup>1</sup>

### Summary

ON THE basis of shipyard accident reports submitted as a part of the Program of Safety and Industrial Health in Contract Shipyards, sponsored by the U. S. Maritime Commission and the U. S. Navy Department, it is estimated that about 700 employees of private shipyards died as a result of injuries experienced in the course of their work during the years of 1943 and 1944.

In comparison with the estimated volume of 173,000 nonfatal disabling injuries experienced by shipyard workers in the same period, the number of fatalities is small. Because of their seriousness, however, fatal accidents are significant to a degree far exceeding their numbers, and for this reason are deserving of particular study for the purpose of determining what specific measures can be taken to prevent the recurrence of similar accidents.

For many of the fatal accidents full details are lacking, but reports have been submitted describing in some detail the circumstances connected with 655 occupational deaths. It is immediately apparent in reviewing these case histories that fatal and nonfatal accidents fall into very similar patterns, and that the differences in the severity of the injuries incurred are due largely to chance. This observation supports the basic theory of all scientific accident prevention, that the proper approach to safety is to attempt to prevent *all* accidents regardless of their probable consequences. There are, however, some significant differences in the patterns formed by the fatal and nonfatal accidents, which should be of importance in planning shipyard safety programs.

It seems particularly important that falls from one level to another were responsible for more shipyard fatalities than were ascribed to any other single accident type. Fully 39 percent of all the reported fatalities resulted from such falls, and more than half of these falls were from scaffolds, stagings, and other working surfaces.

"Struck-by" accidents were the second most prolific producers of fatalities. Nearly a fourth of the reported fatal accidents were of this type. In almost half of these accidents the specific agency involved was a crane or a crane load. Motor vehicles, including straddle-trucks, were the agencies next most commonly involved. Material defects within the agencies caused many of these accidents, particularly those involving cranes. In the greater number of cases, however, the unsafe conditions which contributed to the accidents were created through misuse of the agencies, such as rigging loads improperly,

<sup>1</sup> Prepared in the Bureau's Industrial Hazards Division by Frank S. McElroy and George R. McCormack.

overloading, operating at unsafe speed, or standing, walking, or working within range of the moving cranes or vehicles.

Contact with electric current has not been one of the outstanding sources of shipyard injuries indicated in any previous studies based upon an analysis of all disabling injuries. It ranked third, however, among the types of accidents which resulted in fatalities. Seventy-two of the reported fatalities were the result of contact with electricity. Sixty-nine of these were electrocutions and the other three were cases of burns produced by electric flashes. Defective grounds or broken wiring in machines, powered hand tools, and other electric equipment were responsible for many of these accidents. The failure to understand or to respect the hazard involved in the seemingly simple act of replacing broken light bulbs while standing upon a grounded steel hull led to 10 of the 72 reported fatalities.

In the broad analysis of the fundamental causes of the accidents which resulted in fatalities, the most striking fact is that extremely few of the accidents were attributed to the lack of or the failure to use proper personal safety equipment. In view of the relatively large volume of nonfatal injuries attributed to these causes, this is rather surprising. In other respects, however, the cause pattern of the fatalities was quite similar to that of the nonfatal accidents.

Among the various categories of unsafe working conditions which led to the occurrence of fatal accidents, the most prominent was that of defective agencies. These defective agencies included a very wide variety of materials and equipment. Most important from the standpoint of the volume of fatalities for which they were responsible, however, were improperly rigged crane loads, defective hand tools, defective scaffolds or staging, defective machines, and defective electrical apparatus.

Hazardous arrangements and procedures, primarily in respect to the operation of hoisting apparatus and vehicles, were the second most important group of unsafe working conditions directly connected with the occurrence of fatal accidents, while improperly guarded agencies held third place. The great majority of the improperly guarded agencies were scaffolds, stagings, and other elevated working surfaces, and most of the accidents attributed to these conditions were falls.

Among the various categories of unsafe acts which contributed to the occurrence of fatal accidents, that of unnecessarily assuming an unsafe position was outstanding. Specifically, the most common of the unsafe acts in this general group were standing or working in the way of moving cranes, crane loads, or vehicles; approaching too close to deck openings or to the edge of elevated surfaces; and misusing scaffolds or stagings, particularly, jumping from one surface to another or climbing on the supporting framework.

Some fatalities occurred in practically every occupational group of shipyard workers. In proportion to the number of workers in the craft and in actual numbers, however, there were more fatalities among riggers than in any other occupational group. About 15 percent of the workers reported killed were riggers, 12 percent were welders, and 10 percent were shipwrights.

### *Kind of Injuries Sustained*

Over 45 percent of the injuries reported as resulting in fatalities were fractures. Another 12 percent were simply described as "crushing" injuries. Many of the injuries reported as crushed heads, chests, and pelvic regions were, no doubt, also fracture cases. Electrocutions accounted for 13 percent of the fatal injuries, burns and scalds for 9 percent, and drowning for 7 percent.

Almost 38 percent of the reported fatalities resulted from head injuries. Three-fourths of these were skull fractures. In addition, there were 14 fatalities which were described as "crushed head."

About one-fourth of the fatalities resulted from trunk injuries. Fractured vertebrae, ribs, hips, or pelvic bones were most common, although crushing injuries were numerous. Death resulted more frequently from injuries to the abdomen than from injuries to any other part of the trunk. Contusions or bruises led to 8 fatalities; 6 of these were abdominal injuries. All of the 7 cases described as strains or sprains of the trunk were abdominal cases; in 3 of these death occurred in the course of surgery to correct a hernia.

Fatal injuries involving the upper or lower extremities were comparatively infrequent; injuries to legs, feet, or toes accounted for approximately 4 percent of the fatalities and injuries to arms, hands, or fingers for a little more than 1 percent.

Some injuries were not confined to particular members of the body but were more or less general in extent; these have been classified as "body general." About one-third of the fatal work injuries fell in this group. These included electrocutions, which caused 69 fatalities; drownings, 38 fatalities; and 42 cases of death as a result of extensive burns or scalds.

### *Accident Type*

More fatal injuries resulted from falls than from any other type of accident and practically all of these falls were from one level to another. Although falls to a lower level produced only 12 percent of all disabling injuries reported by shipyards during 1943 and 13 percent in 1944, 39 percent of the fatalities reported during the 2-year period 1943-44 were due to this type of accident, indicating that, although falls are not so common as some other accident types, they are much more likely to result in serious injury.

*Fatalities from falls.*—Over half of the fatal falls were falls from working surfaces. Of the 251 deaths resulting from falls to a lower level, 129 were falls from working surfaces and, of this group, 86 were falls from stagings or platforms. Twelve additional workers were killed when they fell from stagings or platforms upon which they were walking or climbing.

Falls from cranes or crane loads were responsible for 16 fatalities. In 4 of these cases, the injured employee was riding the crane load and in 2 others the worker stood on the load as it was being moved from, or to, its resting place. Ten men were killed when they fell from crane ladders, cabs, or platforms.

Sixteen employees sustained fatal injuries when they fell from ladders and 20 lost their lives as a result of falls from vehicles. Of this latter group, 13 were falls from water craft, 4 were falls from

trucks, 2 were falls from trailers, and 1 was a fall from a railroad car. Falls from stairs caused 4 fatalities.

Although not the direct cause of death, falls on the same level contributed to 10 fatal work injuries. Two men fell into the water and drowned. A third injury in this group occurred to a chipper who fell on his lunch bucket and suffered a contused chest and a ruptured spleen. A female pipefitter's helper sustained a similar injury when she fell on a wet deck. In another case an electrician's helper fell to the pavement when a pipe, which he was using as a lever, broke. He died as a result of a cerebral hemorrhage. Three other workers died from tumors or other complications resulting from this type of fall. In still another case, the trousers of a shipfitter caught on a projecting stud bolt. In an attempt to keep himself from falling the worker grabbed and pulled a fellow employee on top of him as he fell. The weight of the second man caused a brain concussion to the first, resulting in his death.

*"Struck by" accidents.*—The second largest group of fatal accidents involved employees' being struck by moving objects. Accidents of this type caused 157, or about one-fourth of the reported fatal injuries. Fifty-one employees were killed when they were struck by moving crane loads. Secure and proper fastening of the load, regular inspection of cranes, and sufficient clearance for the movement of the load would have prevented practically all of these injuries. Another 22 employees were killed when they were struck by other moving parts of cranes. Moving vehicles struck and killed 24 employees. Trucks, busses, or automobiles were involved in 16 of these deaths, straddle-trucks in 5, and locomotives in 3. Five men were killed when they were struck by kick-backs from saws, and 2 others were struck by parts of exploding grinding wheels.

*Contact with electric current.*—Contact with electric current resulted in death for 72 shipyard workers. Ten workers were electrocuted when they accidentally touched the filaments in broken light bulbs, and 2 others were killed while using defective extension cords. Nine workers were electrocuted while working on or near live circuits, and 12 sustained similar injuries while working on control panels or switches. Hand tools were involved in 13 electrocutions; welding tools were the agencies in 8 of these cases, and drills were involved in 5. Defective grounds led to 9 of the 12 fatalities associated with the use of machines. Eight men were electrocuted while working on or standing near cranes. In 7 of these cases the crane came into contact with overhead power lines; in the other a maintenance man was electrocuted while repairing a crane on which the power had not been shut off.

*"Caught in, on, or between" accidents.*—About 10 percent of the reported fatalities were caused by employees' being caught in, on, or between objects. Crushing injuries were sustained by 34 shipyard workers when they were caught between cranes and other objects, the crane load being the crushing agency in 14 of these cases. Fourteen additional workers were killed when they were caught in, on, or between vehicles.

*Miscellaneous types.*—Thirty-seven employees lost their lives in explosions. Thirteen of these workers were killed in one accident when a gasoline barge exploded. Seven men were killed in explosions of acetylene equipment.

Fire or flames caused the deaths of 29 workers; live steam or hot water, 5; and heat exhaustion, 2.

Accidents involving inhalation, absorption, or ingestion caused the deaths of 10 workers. Welding or burning fumes were reported as responsible for 5 of these fatalities, and carbon tetrachloride fumes for 2. One man was drowned as he attempted to free debris from a propeller, another was suffocated when he failed to leave a ship which was being fumigated with hydrocyanic acid, and a third was asphyxiated when a bottle of carbon dioxide was broken.

### *Unsafe Working Conditions*

Defective equipment, hazardous arrangement or procedure, and unguarded, or inadequately guarded equipment caused practically all of the 463 fatal accidents in which an unsafe working condition was known to exist. Defective equipment was responsible for over one-third of the accidents, hazardous arrangement or procedure for over one-fourth, and inadequately guarded agencies for about one-fifth.

*Defective equipment.*—Defective scaffolds, stagings, or catwalks were responsible for accidents resulting in 23 of the reported fatalities. Four of these deaths resulted when workers leaned against insecure backrails which parted under the pressure and allowed the workers to fall. Loose planks which tipped or turned when stepped upon dropped 5 workers to their deaths, and another employee was killed when he was struck by a plank dislodged from an overhead staging.

Accidents involving defective cranes or crane parts led to 42 fatalities, 32 of which were specifically associated with defective slings or sling loads. Fourteen men were killed when the loads, or part of the loads, dropped from the hooks or cables because of defective rigging, and 10 others were killed when the lifting chain or cable parted.

Accidents involving defective hand tools were responsible for 26 fatalities. Thirteen of these workers were killed by fires or explosions attributed to gas leaks in burners' torches. Three welders were electrocuted by coming into contact with defective welding tools, and 5 other electrocutions were ascribed to defective wiring in portable drills. One man was killed by parts from an exploding grinding wheel.

Twelve of the 18 fatalities associated with defective machines resulted because of electrical short circuits in the machines. Ten workers were killed in accidents involving defective electric extension cords.

*Hazardous arrangement or procedure.*—Accidents involving inadequate planning for the use of cranes led to 58 of the reported fatalities. Insufficient clearance in the operation caused 27 fatal injuries. Seventeen of these occurred when employees were caught between the crane cab and another object or were struck by the crane while they were working on the craneway. Ten workers were killed in accidents that occurred when the crane load struck some object as the load was being raised or lowered. Twelve other fatalities occurred when the employees were struck by the load as it was being lowered, or were struck by objects falling from a suspended load when it was carried over their heads. Swinging slingloads which struck the injured employee caused an additional 8 fatalities, and 7 men were electrocuted when the crane on or near which they were working came in contact with high-tension wires.

■ Unsafely stored or piled materials caused 25 fatal accidents. In most of these cases the piles of materials were insufficiently braced or poorly placed. Loose materials lying on scaffolds or other working surfaces were specifically responsible for 9 of these deaths.

The need for better control of traffic in shipyards is emphasized by the fact that 18 workers lost their lives when they were struck by cars or trucks. Standard-type trucks were involved in 10 of these accidents; straddle-trucks in 5; and automobiles or busses in 3.

*Unguarded or improperly guarded agencies.*—Improperly guarded agencies were responsible for 106 fatalities. Unguarded or inadequately guarded scaffolds, stagings, or catwalks accounted for 48 of these, and open manholes, hatchways, and other unguarded openings in working surfaces caused 40 additional fatalities. The 5 fatalities associated with unguarded machines all resulted from kick-backs from power saws. Nine workers were electrocuted when they came in contact with unguarded or inadequately guarded electrical equipment such as switches and power lines.

### *Unsafe Acts*

Of the 655 fatalities included in this study, 370 were known to have resulted from accidents involving an unsafe act. Of the remainder, there were 173 cases which apparently involved no unsafe acts, while 112 could not be classified because of insufficient data.

Among the accidents in which an unsafe act was known to have been committed, over 65 percent were caused by the injured employee's taking an unsafe position or posture. Exposure to the crane or its load caused 84 of the 242 fatalities in this group of unsafe acts. Unnecessary exposure to the slingload alone caused 41 of these fatal work injuries, and 43 other workers were killed when they exposed themselves to other parts of the crane. In most of the latter group of cases the employees were caught between the crane cab and some other object or were struck by the crane as it was being moved.

Thirty-three workers lost their lives after taking an unsafe position on stagings or platforms on which they were working; 4 others died as a result of accidents on stagings on which they were climbing or walking. Seven employees were killed when they fell from the staging as they attempted to climb from one level to another, and 3 others fell as they attempted to jump from one staging to another. Falls from other working surfaces caused 24 additional injuries in this group.

Unnecessary exposure in connection with the operation of vehicles resulted in death to 17 shipyard workers. Nine men were killed when they fell from vehicles on which they were riding or were caught between the vehicles and other objects. Three men drowned when they fell from ships on trial runs. Another employee was killed when he attempted to grease the mechanism of a dump truck as the body was being lowered; he sustained a spine fracture.

Using unsafe equipment or equipment unsafely constituted the second highest number of unsafe acts. Most of these cases involved misuse of stagings or scaffolds, hand tools, hoisting apparatus, or electrical equipment.

*Fatalities, by Occupation of Injured Worker*

Practically every regular shipyard occupation was represented in the fatality list of 1943 and 1944. There were, however, certain highly significant occupational groupings among the reported cases, which emphasize the variations in the hazards faced by workers of the different crafts. Fully 37 percent of the workers who were killed were employed as shipwrights, riggers, or welders, or as helpers to one of these crafts. An additional 27 percent of the fatally injured workers were classified as electricians, laborers, pipefitters, or shipfitters, or as helpers to these crafts. Over 64 percent of the fatalities, therefore, fell within seven occupational groups which together include less than half the total employment of shipyards.

The greatest variation between the fatality record and the general occupational distribution in shipyards was in respect to the riggers. This occupation generally constitutes about 2 percent of the total employment in shipyards. In the fatality record, however, riggers accounted for no less than 15 percent.

This extreme disproportion was not apparent in respect to any other craft, but the proportions of fatalities to shipwrights, crane operators, electricians, and erectors were each at least double the relative numerical importance of these crafts in the total shipyard population. Similarly, the proportion of all fatalities which befell pipefitters, shipfitters, and welders substantially exceeded the proportion of all shipyard employment represented by those crafts.

*Riggers.*—Although there were a few fatal accidents to riggers which resulted from unsafe conditions or operations not directly connected with the movement of materials by means of cranes, most of the cases involving riggers or their helpers were closely associated with hazards arising directly from the operations of their craft.

Safe practice dictates that workers should remain clear of moving sling loads. Failure to obey this rule led to at least 34 of the fatal injuries to riggers. Nine riggers were killed when they were struck by swinging sling loads. In 7 of these cases, the injured was caught between the swinging load and a fixed object. Three of these accidents occurred when the load was being picked up and 3 occurred when the load was being lowered into place. Another rigger was killed, when, after giving the signal to the crane operator to swing a roof section into place, he turned his back to the moving crane load and was knocked into an opening on the deck.

Defective hoisting apparatus, which permitted the load or part of the apparatus to drop on the worker, was responsible for 9 fatal accidents. Two riggers were killed in separate accidents when the cable "ran out" of the drum. In one of these accidents the cable was fastened to the drum, but pulled out of the fastening; in the other, the cable was not fastened. The recommendation of the safety inspector in the latter case was: "Recommended that superintendent and foreman place identification marks near end of cable." Crane booms, which fell because of mechanical defects, caused 3 riggers to lose their lives; and a defective cable caused a small crane to tip and fall on a fourth worker.

Poorly rigged loads which permitted objects to drop from the sling resulted in 9 fatal injuries. In 2 other accidents, riggers crawled

under the loads after they had been landed and were killed when the loads shifted.

Four riggers were killed when they attempted to land or guide sling loads from an unsafe position. In one case the worker was standing on the rail of the ship. The swing of the crane threw him off balance and he fell 30 feet. In a similar accident, a rigger was standing on a stairway. He was thrown to the main deck 15 feet below.

Standing on material upon which loads were being placed resulted in the death of 6 riggers. Two of these men were standing on racks which became unbalanced when the load was placed. In the other 4 cases the slings struck and jarred the piled material on which the riggers were standing, throwing 3 men from the piles and causing the fourth to be crushed among the materials when the pile collapsed. One of these men experienced only a fractured ankle at the time, but died later as a result of a blood clot.

Four riggers were killed when they were standing near, or on, the load, as it was moved. In one of these instances the rigger was standing on a rack against which the crane load was resting. As the crane load was lifted the rack collapsed and the worker was caught in 10 tons of falling steel. Two other riggers were injured when the piles of materials on which they were working shifted and fell on them.

Riding, or sitting, on the crane is usually forbidden. Violation of this rule, however, resulted in 8 fatal injuries to riggers. In 5 of these accidents the injured workers were sitting on the chassis of the crane and were crushed as the crane was swung around. Three other riggers fell under the wheels of cranes.

Four riggers were injured fatally as a result of riding the sling load. In 2 of these cases the load shifted, dropping the workers to the area below. A third injury was caused by a cable parting and dropping the worker; in the fourth case the crane operator dropped the load into the water, drowning the rigger.

Thirteen riggers lost their lives when they fell from walkways, ladders, or working surfaces. Unguarded or inadequately guarded working areas contributed to 4 of these accidents. In one case, the rigger was leaning against a weakened railing when it gave way, and he fell 50 feet to the main deck. In another accident, an inexperienced rigger became excited and backed away from a rising load. He fell 18 feet from the unguarded platform on which he was standing. A third rigger fell from the deck of a ship to a float and sustained a fractured skull. Another dislodged a safety bar across a doorway when he was throwing a rope upward to another level; later he fell through the unguarded doorway. Four riggers sustained fatal injuries while working on defective or inadequate working surfaces and 5 others lost their lives when they failed to use proper care in climbing or walking. Two of these men fell from ladders, another stepped over the side of the ship to the anchor and fell, and 2 others fell from objects on which they were walking instead of using the provided ladders or the designated walkways.

Four riggers were killed (2 in one accident) as a result of explosions, and 4 were electrocuted. In each of the latter four accidents, the boom of the crane came in contact with an overhead power line.

Two riggers were injured when they were struck by moving vehicles. Two others died as a result of surgical operations for correction of apparently nonfatal injuries. In one of these cases the worker

died during an operation for hernia, and in the second the worker died during an operation for the removal of a foreign body from his eye.

**Welders.**—Over 60 percent of the reported fatal injuries to welders were due either to contact with electric current or to falls to a lower level. The dangers of low-voltage current are emphasized by these electrocutions. Five of the 24 deaths in this group resulted from contact with the exposed filaments of broken electric-light bulbs, and 7 men were killed when the current from their welding torches passed through their bodies. Clothing, which had become wet with perspiration, contributed to at least 2 of the latter group of injuries.

Defective grounds on welding machines caused 6 fatal accidents to welders. Two of these occurred only 8 days apart on the same machine. Open switches accounted for 2 deaths, and 1 man was electrocuted while he was pulling a 440-volt feed line for a welding machine. The insulation was broken, permitting his hand to come into contact with the electric current.

Sixteen of the 24 fatal falls were from stagings or platforms. Most of these were due to lack of, or inadequate, guards. In 2 of these accidents, the welders fell between the guardrail and the working surface. Loose flooring on the stagings contributed to 3 fatal accidents.

Two welders were killed when they fell from the deck of a ship. Two others fell into open hatchways and 2 fell from ladders. Another was killed when he fell into an open, unguarded pit in the yard and still another fell from the boat rail on which he was standing.

Fifteen welders lost their lives when they were struck by moving objects. Seven of these were killed by crane loads. Four were crushed when the plates or brackets upon which they were working fell on them. One man was struck by a straddle-truck and another by a standard-type truck.

Burns were responsible for 5 fatalities. Two welders were fatally burned when they used an oxygen line for a cooling unit. When they lit their torches they were enveloped in flames. In a similar accident, a fire was started when a defective oxygen hose permitted the oxygen to escape into the working area. Two other welders were burned while welding overhead without wearing protective clothing. In one of these cases the worker neglected to report for first aid until an infection had developed.

Four welders were killed in explosions. Another developed pneumonia after breathing welding fumes, and a sixth became unconscious and died, presumably because of inadequate ventilation, while welding in a confined space.

**Shipwrights or carpenters.**—Slightly over half of the 63 reported fatalities to shipwrights were caused by falls from one level to another. Fourteen of these falls were from scaffolds. In 3 of these cases the worker fell over or under the guardrail. Three others were caused by defective scaffolds. In one case the surface was slippery because of rain, in another the scaffold planks were not bolted, and in the third a cable pulled loose from a swinging scaffold. Four men fell as they attempted to move planks on scaffolds and became unbalanced. One carpenter lost his balance when he was struck by a blast of air from an air valve, and another fell as he was climbing down the outside of staging.

Six carpenters were killed when they fell into deck openings, none of which were guarded, and 6 others fell overboard. Two of the latter group were killed in the same accident. In this case, the men were working on a life boat which was swung over the side of the ship. The release gear of the lifeboat was made fast to the floor boards. As they removed the retaining pins from the floor boards, the release was automatically tripped and the life boat fell 42 feet to the pier. Both men were thrown clear of the boat and sustained fractured skulls.

Eighteen shipwrights were killed as a result of being struck by moving objects. Four of these sustained fatal injuries in one accident when a plate on which they had been working fell on them. In this accident, a padeye was welded to a bulkhead and another to a shell-plate assembly. The padeyes were connected by a turnbuckle which was being used to pull the plate into position. The padeye on the bulkhead pulled off during the operation, causing the shell-plate assembly to fall on the workers. Four other workers were killed by kick-backs from circular saws. None of the saws was guarded. Three men were killed when they were struck by cranes or crane loads and one was struck by a plank which slipped out of a hand line which was being used to lower the plank from overhead. Failure to use equipment safely caused two additional deaths among the shipwrights.

Four shipwrights were caught between moving objects and crushed. One man was building a box between two railroad cars and was caught between them as they were moved. A second man started a boat in gear and with a full throttle, so that the boat lurched forward under the pier and crushed him. Another was caught between a moving overhead crane and a pillar as he was standing on the crane track. The fourth of these accidents occurred to a carpenter working in the hold of a ship. He was ordered to stand clear of a sling load which was being landed and he moved back 6 feet. The load, however, hit the deck and skidded in his direction, pinning him between the load and a stanchion.

Two shipwrights were electrocuted while working with short-circuited machines. Another was working on a temporary scaffold under the power rail of a gantry crane. As he straightened up he came into contact with the exposed rail.

Improper care in walking contributed to 2 fatal injuries. In one of these accidents a splinter entered a shipwright's leg as he brushed against a timber during a launching. He failed to report to the first-aid room as instructed by his foreman; infection developed, causing his death. In the other accident, the injured was 1 of 3 men carrying a heavy plank. The plank struck a skidway and the shipwright walked into the end of the plank, rupturing his intestine.

*Shipfitters.*—Falls accounted for more fatalities to shipfitters than any other type of accident. Of the 53 reported fatalities to shipfitters, 28 were caused by falls. Twenty-six of these were falls to a lower level; falls from stagings or scaffolds were responsible for 16 deaths, 3 men fell from ladders, 4 men fell into holds of ships, and 3 others fell over the sides of ships.

Injuries resulting from being struck by moving objects caused the deaths of 11 shipfitters. Four were killed when they were struck by moving vehicles. Straddle-trucks were involved in 2 of these accidents. Four other workers were fatally injured when they were

struck by cranes or crane loads. Three of these men were struck by the load and the fourth was injured when he was struck by a crane as he was walking on the craneway. Another worker died during an operation made necessary as a result of an accident in which he struck himself on the leg with a 16-pound sledge hammer.

Four shipfitters were killed in explosions. Three of these were injured in the same accident when a barge on which they were working exploded.

*Electricians.*—Of the 42 reported fatalities to electricians, falls to lower levels accounted for 16, and contact with electric current for 13.

Falls from staging were responsible for 3 fatalities, and falls into deck openings for 3 more. The remaining fatalities from falls resulted from a variety of causes. One man, partially intoxicated, fell while climbing onto a crane. A second man was walking on a catwalk. As he stepped on welding lines on the walk, the welder pulled the lines, with the result that the electrician fell to the bottom of the hold and sustained a fractured skull. Another electrician stepped from the crane walkway to the crane, slipped on the wet walkway, and fell 80 feet to the ground. Still another employee leaned against a railing, the welding into place of which had been left uncompleted by the welders on the previous shift, and fell 60 feet. A leaderman sustained a fractured skull when he attempted to place a heavy plank from one bulkhead to another; the board pulled him off balance and he fell from the bulkhead. A marine electrician who tried to jump the 3 feet between hulls fell between them, striking the bumper logs 40 feet below.

Six electricians were electrocuted by coming into contact with high-voltage lines. Three of these deaths occurred while men were working on the lines, and 2 were caused by workers touching the lines accidentally while working near them. Electric current encountered while working on or near switchboards or control boxes caused the deaths of 5 workers. Two other workers were electrocuted while working on machinery, but complete details on how the accidents occurred are lacking.

Three electricians were caught in, on, or between, moving objects. Two of these deaths occurred in the course of making tests. In one of these cases the operator attempted to check the speed of a rapidly moving boat; this operation was done so quickly that the boat dipped and sank, causing the electrician to drown. In the other, the electrician was riding, during a test run, on an elevator loaded with a concrete beam and two anchors; he was crushed when one of the elevator cables broke, causing the test load to shift upon him.

Two electricians in different yards used carbon tetrachloride to clean electric motors. Both men died as a result of breathing the fumes. Three other men died in explosions; two of these died in one accident when a barge exploded.

*Pipefitters or steamfitters.*—Falls, contact with electric current, and being struck by moving objects were the three most common types of accidents among the cases involving pipefitters. Of the 37 reported fatalities, 12 were due to falls, 10 of which were to a lower level. Two men fell from ladders, 2 fell through unguarded deck openings, and 2 fell over the sides of the ships on which they were working. One man fell off a ship and was drowned when the wooden handrail, to which he was holding, pulled loose. One pipefitter fell while de-

scending a stairway, one fell as he attempted to jump from the ship to a gangplank, another fell under the wheels of a trailer on which he had been riding, and another fell from a pile of pipe.

Seven pipefitters were killed when they came into contact with electric current. Defective equipment caused 6 of these accidents, and the seventh occurred when the pipefitter raised his head under an electric switchboard and touched a live wire.

Three pipefitters were struck by moving vehicles, and one was struck by a crane load as it fell on the truck in which he was sitting. Hatch covers piled beside an open hatchway and not adequately secured fell, striking a helper working in the hold. Another worker was struck by the anchor when the brake failed.

Four pipefitters were killed in explosions involving acetylene gas.

*Machinists.*—Over half of the 30 machinists reported killed were injured when they fell to a lower level or were struck by a moving object. Three fell from stagings on which they were working, and 3 fell from walkways. In at least 3 of these cases, railings had been installed but the workers fell either under the railing or between the scaffold and the ship. Two men fell from cranes or from overhead crane rails, and one fell from a ladder.

Seven machinists sustained fatal injuries when they were struck by moving objects. Two of these men were killed when material fell through deck openings and struck them as they were working below deck. One man was killed by a kick-back from a power saw as he was walking through a shop. In another case, the contact pin on the governor of an unguarded portable grinding wheel was too short, allowing the wheel to operate at twice its normal speed. The wheel exploded and a fragment struck the machinist, causing injuries which resulted in his death.

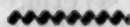
Four men were caught between, or on, moving objects. In one of these cases the man's trousers caught in the wheel of a straddle-truck, pulling him to the ground.

Three machinists were fatally burned when they came into contact with steam or fire, and two were electrocuted. One of the electrocutions occurred when the worker attempted to replace a broken light bulb. Three men were killed (two of these in the same accident) by explosions. In both of these instances, fellow workers had previously opened oxygen lines and the explosions occurred when burning torches were lighted. Another machinist was overcome by hydrocyanic-acid fumes. The acid was being used as a fumigation agent and the machinist neglected to leave the ship after a signal had been given to do so.

*Burners.*—Nine, or nearly half, of the 19 burner fatalities resulted from falls. In only 3 of these, however, was the fall from a scaffold or platform. Most of the other falls occurred while the employees were working in dangerous positions. One man was pulling his burner lines while standing on a railing around the hold, a second attempted to lift a jack while "precariously perched" on the ribs of a forepeak section, and a third was kneeling near an open door on the side of the ship. One burner fell from the skids as he attempted to step down instead of using the stairs. Another burner stepped on a hatchboard lying across the hatchway, and dropped 25 feet to the bottom of the hold; the hatchboard was unsupported at one end.

Three burners were burned to death in separate accidents when gas which had accumulated in confined working spaces was ignited. One other burner was overcome by carbon-monoxide gas while working in an inner bottom.

One burner died as a result of a seemingly minor injury. While burning, he slipped and struck his shin against a beam. He was given first aid and was later hospitalized. About 2 months later he died of infection.



## Industrial Injuries in Manufacturing, First Quarter of 1945

THE volume of work injuries in manufacturing industries during each of the first 3 months of 1945 was somewhat higher than in either November or December of 1944. In comparison with rates of 16.8 in November and 15.9 in December, the manufacturing group averaged 17.4 disabling injuries for every million employee-hours worked in January. In February the rate was 17.5 and in March it dropped slightly, to 17.0. The average frequency rate of 17.3 for the entire 3-month period, however, was substantially lower than the average of 18.8<sup>1</sup> for the full year of 1944, and similarly was well below the average of 18.7 for the first quarter of 1944.

On the basis of injury reports submitted by over 13,500 manufacturing establishments, it is estimated that about 159,000 manufacturing workers were disabled as the result of injuries experienced in the course of their employment during the first quarter of 1945. Information available at the end of March indicated that about 800 of these injuries had ended fatally during the period and that about 5,900 had been so serious that it was immediately apparent that the workers would have physical handicaps for the rest of their lives. Later information concerning the final outcome of the other injuries, which appeared to be only temporary disabilities at the time the reports were prepared, may necessitate some upward revision in these estimates of the volume of more serious injuries.

The economic losses arising from these injuries cannot be fully estimated from the information now available. The actual loss in working time during the first quarter of 1945, however, may be conservatively estimated as about 3,180,000 man-days, which is equivalent to full-time employment throughout the period for over 40,000 workers.

For the purpose of making available more specific data with which the experience of individual establishments may be compared, some of the industry classifications shown until 1945 have been subdivided. The accompanying table lists for the first quarter of 1945 a number of new industry classifications for which there are no comparable records for 1944. Among the 77 classifications for which comparison with 1944 is possible, however, there were 46 with average frequency rates for the first quarter which were at least a full frequency-rate point lower than their corresponding averages for the year 1944. For 12 of these industry classifications the reduction amounted to 5 or more frequency-rate points. In contrast, there were only 12

<sup>1</sup> Preliminary. Subject to revision on the basis of the Bureau's annual industrial injury survey.

industries for which the first-quarter frequency rates were significantly higher than their averages for 1944.

The lowest average injury-frequency rate for the first quarter of 1945 was that of the plants engaged in manufacturing electric-light bulbs. In these plants there were only 3.3 disabling injuries for each million employee-hours worked during the quarter. The synthetic-rubber manufacturing group and the miscellaneous apparel and accessories group each had an average of 4.7, while the explosives-industry average of 4.8 was only slightly higher. No other industries had average frequency rates below 5. There were, however, 18 industries which had first-quarter frequency rates between 5 and 10. At the other extreme there were two groups of plants with rates above 50 and two others with rates above 40. These were plants exclusively engaged in sawmill operations, with an average rate of 55.8; plants combining sawmill and planing-mill operations, with an average of 52.7; iron foundries, with an average of 43.4; and plywood mills, with an average frequency rate of 41.3.

*Industrial Injury-Frequency Rates <sup>1</sup> for Selected Manufacturing Industries, First Quarter of 1945, with Cumulative Rates for 1944*

Industry <sup>1</sup>	First quarter of 1945					1944: Annual fre- quency rate <sup>2</sup>
	Num- ber of estab- lish- ments <sup>3</sup>	Frequency rate <sup>4</sup> for—				
		Jan- uary	Feb- ruary	March	First quarter	
<b>Apparel:</b>						
Clothing, men's and boy's.....	483	10.9	9.0	8.4	9.4	10.7
Clothing, women's and children's.....	356	8.3	9.2	5.3	7.6	5.7
Apparel and accessories, not elsewhere classified.....	16	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	4.7	( <sup>5</sup> )
Trimmings and fabricated textile products, not elsewhere classified.....	87	25.8	26.9	24.1	25.5	( <sup>5</sup> )
<b>Chemicals:</b>						
Compressed and liquefied gases.....	65	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	13.1	( <sup>5</sup> )
Drugs, toiletries, and insecticides.....	85	16.7	18.2	14.6	16.4	19.5
Explosives.....	62	5.4	3.8	5.2	4.8	6.1
Industrial chemicals.....	214	12.1	12.1	11.4	11.9	( <sup>5</sup> )
Paints, varnishes, and colors.....	75	16.6	18.9	18.3	17.9	18.2
Plastic materials, except rubber.....	16	7.8	5.5	3.7	5.7	( <sup>5</sup> )
Soap and glycerin.....	33	11.4	8.3	14.0	11.3	9.4
Synthetic rubber.....	23	4.9	4.5	3.6	4.7	( <sup>5</sup> )
Synthetic textile fibers.....	21	7.2	6.5	7.0	6.9	6.6
Chemical products, not elsewhere classified.....	82	17.4	19.3	15.6	17.4	12.5
<b>Electrical equipment:</b>						
Automotive electrical equipment.....	20	16.7	11.5	14.2	14.1	( <sup>5</sup> )
Batteries.....	36	25.1	18.6	23.0	22.3	( <sup>5</sup> )
Communication and signaling equipment, except radio.....	41	7.9	9.8	7.2	8.3	( <sup>5</sup> )
Electrical equipment for industrial use.....	348	8.8	8.1	7.6	8.1	( <sup>5</sup> )
Electric lamps (bulbs).....	16	3.4	4.8	1.9	3.3	( <sup>5</sup> )
Insulated wire and cable.....	37	14.4	17.6	19.3	17.1	( <sup>5</sup> )
Radios and phonographs.....	233	9.8	9.7	7.7	9.0	8.2
Electrical equipment, not elsewhere classified.....	29	7.8	8.1	8.2	8.0	( <sup>5</sup> )
<b>Food:</b>						
Baking.....	38	22.4	22.4	38.7	27.8	20.3
Canning and preserving.....	50	24.9	30.6	24.6	26.6	25.7
Confectionery.....	8	19.5	20.0	18.4	19.3	17.1
Distilleries.....	39	21.0	15.6	11.4	15.9	( <sup>5</sup> )
Flour, feed, and grain-mill products.....	9	13.0	20.7	22.1	18.6	22.7
Slaughtering and meat packing.....	485	32.1	31.0	30.3	31.2	36.0
Food products, not elsewhere classified.....	35	25.4	22.7	23.3	23.8	26.6
<b>Furniture and lumber products:</b>						
Furniture, wood.....	63	38.3	45.2	33.9	39.0	( <sup>5</sup> )
Mattresses and bedsprings.....	14	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	14.7	( <sup>5</sup> )
Wooden containers.....	523	40.2	39.4	37.8	39.2	51.6
Miscellaneous wood products, not elsewhere classified.....	88	27.2	23.4	36.1	29.3	39.3

See footnotes at end of table.

Industrial Injury-Frequency Rates<sup>1</sup> for Selected Manufacturing Industries, First Quarter of 1945, with Cumulative rates for 1944—Continued

Industry <sup>1</sup>	First quarter of 1945					1944: Annual fre- quency rate <sup>1</sup>
	Num- ber of estab- lish- ments <sup>3</sup>	Frequency rate <sup>4</sup> for—				
		Jan- uary	Feb- ruary	March	First quarter	
<b>Iron and steel:</b>						
Bolts, nuts, washers, and rivets.....	56	22.4	31.6	2.09	24.8	27.5
Cold finished steel.....	24	21.0	16.5	23.1	20.3	( <sup>5</sup> )
Cutlery and edge tools.....	37	29.0	24.2	26.4	26.5	26.6
Fabricated structural steel.....	226	28.3	30.8	31.6	30.2	33.5
Forgings, iron and steel.....	153	30.4	28.7	29.6	29.6	35.4
Foundries, iron.....	446	42.4	43.7	44.0	43.4	( <sup>5</sup> )
Foundries, steel.....	105	32.6	39.6	35.6	35.8	( <sup>5</sup> )
Hardware.....	40	15.4	14.9	17.3	15.9	18.2
Heating equipment, not otherwise classified.....	64	28.7	27.4	29.9	28.7	30.8
Iron and steel.....	206	8.8	8.7	8.7	8.7	9.4
Metal coating and engraving.....	89	22.2	18.1	18.6	19.6	( <sup>5</sup> )
Plate fabrication and boiler shop products.....	157	32.2	32.6	35.6	33.5	48.2
Plumbers' supplies.....	25	12.4	15.2	13.7	13.7	17.8
Screw-machine products.....	111	16.3	13.5	13.4	14.4	24.3
Sheet-metal work.....	55	27.3	30.0	28.3	28.5	40.9
Stamped and pressed metal products, not else- where classified.....	231	19.7	19.3	20.1	19.7	32.4
Steam fittings and apparatus.....	57	22.9	21.0	21.0	21.7	24.2
Steel barrels, kegs, drums, and packages.....	44	34.5	30.6	33.0	32.7	( <sup>5</sup> )
Steel springs.....	15	24.7	20.5	22.0	22.5	( <sup>5</sup> )
Tin cans and other tinware.....	21	12.5	16.0	13.5	14.0	17.7
Tools except edge tools.....	72	21.5	24.9	19.9	22.0	25.7
Wire and wire products.....	148	20.2	22.2	20.8	21.0	22.6
Wrought pipes, welded and heavy-riveted.....	14	22.6	16.9	18.3	19.3	( <sup>5</sup> )
Iron and steel products, not elsewhere classified.....	62	31.3	25.1	31.3	29.3	( <sup>5</sup> )
<b>Leather:</b>						
Boots and shoes, not rubber.....	290	13.7	13.6	13.2	13.5	14.1
Leather.....	25	27.0	34.2	27.1	29.3	29.2
Leather products, not elsewhere classified.....	29	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	9.3	20.5
<b>Lumber:</b>						
Sawmills.....	92	52.6	67.4	48.4	55.8	( <sup>5</sup> )
Sawmills and planing mills combined.....	31	58.7	47.6	51.0	52.7	( <sup>5</sup> )
Planing mills.....	607	37.3	34.6	32.0	34.8	( <sup>5</sup> )
Plywood mills.....	46	40.4	47.5	36.2	41.3	( <sup>5</sup> )
<b>Machinery, except electric:</b>						
Agricultural machinery and tractors.....	73	23.0	20.9	21.1	21.7	22.8
Bearings, ball and roller.....	31	16.8	21.9	12.9	17.1	( <sup>5</sup> )
Commercial and household machinery.....	57	18.3	15.7	16.2	16.7	18.6
Construction and mining machinery.....	118	23.4	24.7	21.9	23.3	27.4
Elevators, escalators, and conveyors.....	23	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	26.6	( <sup>5</sup> )
Engines and turbines.....	66	12.0	13.5	13.7	13.1	11.4
Food-products machinery.....	31	26.3	22.4	25.1	24.7	32.3
General industrial machinery, not elsewhere classified.....	333	22.7	23.9	23.5	23.4	( <sup>5</sup> )
General machine shops (jobbing and repair).....	260	20.9	22.5	17.8	20.3	20.9
Mechanical measuring and controlling instru- ments.....	63	11.0	11.8	10.8	11.2	( <sup>5</sup> )
Mechanical power-transmission equipment, ex- cept bearings.....	83	17.0	17.8	17.7	17.5	( <sup>5</sup> )
Metalworking machinery.....	592	14.9	14.8	15.1	14.9	17.3
Pumps and compressors.....	77	14.7	15.5	19.1	16.4	( <sup>5</sup> )
Special industry machinery, not elsewhere classi- fied.....	92	25.5	20.3	26.0	24.0	24.1
Textile machinery.....	14	13.3	9.6	7.6	10.0	21.0
<b>Nonferrous metals:</b>						
Aluminum and magnesium products.....	15	19.5	12.5	15.0	16.8	( <sup>5</sup> )
Foundries, nonferrous.....	294	26.1	26.1	27.8	26.7	( <sup>5</sup> )
Secondary smelting, refining, rolling, drawing, and alloying.....	23	23.5	21.6	15.7	20.2	( <sup>5</sup> )
Watches, clocks, jewelry, and silverware.....	14	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	7.4	( <sup>5</sup> )
Nonferrous metal products, not elsewhere classi- fied.....	95	28.4	24.1	25.8	26.1	( <sup>5</sup> )

See footnotes at end of table.

*Industrial Injury-Frequency Rates<sup>1</sup> for Selected Manufacturing Industries, First Quarter of 1944, with Cumulative Rates for 1944—Continued*

Industry <sup>2</sup>	First quarter of 1945					1944 Annual fre- quency rate <sup>4</sup>
	Num- ber of estab- lish- ments <sup>3</sup>	Frequency rate <sup>4</sup> for—				
		Jan- uary	Feb- ruary	March	First quarter	
<b>Ordnance:</b>						
Ammunition under 20 mm.....	21	7.4	9.7	6.7	7.6	7.8
Ammunition, except small-arms.....	371	20.8	20.7	20.5	20.7	24.3
Guns and related equipment.....	92	12.5	15.9	15.1	14.5	17.1
Sighting and fire-control equipment.....	41	9.2	8.8	7.9	8.6	8.0
Small arms.....	62	20.3	16.5	16.0	17.6	14.1
Tanks, military.....	14	26.3	26.0	22.9	25.0	14.5
Tank components, military.....	54	24.7	28.2	25.0	25.9	21.0
Ordnance and accessories, not elsewhere clas- sified.....	45	18.0	17.8	22.0	19.3	22.7
<b>Paper:</b>						
Paper boxes and containers.....	395	24.8	24.6	23.2	24.2	24.8
Paper.....	251	26.5	29.1	27.5	27.6	29.7
Paper and pulp, integrated.....	88	23.1	21.7	22.5	22.4	25.3
Pulp.....	20	28.6	37.8	36.9	34.0	35.1
Paper products, not elsewhere classified.....	34	17.9	16.8	13.0	15.9	20.5
<b>Printing:</b>						
Book and job printing.....	41	9.5	7.5	12.6	10.0	11.0
<b>Rubber:</b>						
Rubber boots and shoes.....	15	11.0	11.4	7.6	9.9	13.8
Rubber tires and tubes.....	35	13.1	13.1	15.2	13.8	14.7
Rubber products, not elsewhere classified.....	89	21.7	19.7	16.7	19.3	17.3
<b>Stone, clay and glass:</b>						
Brick, tile, and terra cotta.....	27	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	28.5	47.3
Glass.....	37	12.4	15.7	15.3	14.4	17.5
Pottery and related products.....	36	23.6	25.6	21.2	23.4	17.9
Stone, clay, and glass products, not elsewhere classified.....	60	12.6	15.8	10.9	13.0	15.8
<b>Textiles:</b>						
Cotton yarn and textiles.....	220	13.9	12.9	12.8	13.2	14.7
Dyeing and finishing textiles.....	51	15.8	22.8	20.9	19.8	22.8
Knit goods.....	82	10.7	7.4	12.0	10.1	11.0
Rayon, other synthetic, and silk textiles.....	53	12.6	14.2	17.2	14.7	14.3
Woolen and worsted textiles.....	159	17.9	17.9	18.9	18.2	18.9
Miscellaneous textile goods, not elsewhere clas- sified.....	31	19.1	24.5	16.6	19.9	( <sup>5</sup> )
<b>Transportation equipment:</b>						
Aircraft.....	33	7.9	8.1	7.8	8.0	8.9
Aircraft parts.....	265	10.6	11.9	11.7	11.4	12.3
Motor vehicles.....	85	22.7	21.6	19.9	21.4	14.4
Motor-vehicle parts.....	69	18.2	19.0	21.3	19.5	25.4
Railroad equipment.....	39	20.1	19.7	22.6	20.9	22.0
Shipbuilding.....	241	21.4	21.6	21.5	21.5	23.7
<b>Miscellaneous manufacturing:</b>						
Fabricated plastic products.....	40	18.5	12.8	14.1	15.1	( <sup>5</sup> )
Optical and ophthalmic goods.....	34	11.3	6.6	9.8	9.3	( <sup>5</sup> )
Photographic apparatus and materials.....	25	7.2	6.8	7.1	7.0	( <sup>5</sup> )
Professional and scientific instruments and sup- plies.....	74	7.8	8.0	9.1	8.3	( <sup>5</sup> )
Miscellaneous manufacturing, not elsewhere clas- sified.....	167	14.9	13.4	14.2	14.2	( <sup>5</sup> )

<sup>1</sup> The frequency rate represents the average number of disabling industrial injuries for each million employee-hours worked.

<sup>2</sup> A few industries have been omitted from this table because the coverage for the month did not amount to 1,000,000 or more employee-hours worked.

<sup>3</sup> Number of establishments shown are for March 1945.

<sup>4</sup> Computed from all reports received for the month; not based on identical plants in successive months.

<sup>5</sup> Preliminary.

<sup>6</sup> Not available.

## Industrial Relations

### Collective Agreement in Colombian Petroleum Industry, 1944<sup>1</sup>

A COLLECTIVE agreement covering some 2,500 workers, or about 31 percent of the total in the Colombian petroleum industry, was signed in Bogotá April 19, 1944, by representatives of the National Labor Bureau of Colombia, the Tropical Oil Co., the Syndical Labor Union of Barrancabermeja, and the Confederation of Workers of Colombia. It granted a wage increase to all wage earners covered by the contract. The provisions regulated hiring and dismissal, and provided for workmen's compensation, paid vacations, workers' housing, company stores, and the settlement of organized workers' claims. The agreement was to remain in force until July 1, 1946, and, unless renounced by either of the contracting parties 1 month before the expiration date, would automatically be renewed from year to year. Social benefits already granted to workers by the company and not mentioned by the agreement were to continue unmodified.

#### Principal Provisions of Agreement

*Employment and dismissal.*—In filling vacancies or increasing personnel, former employees discharged for reasons other than bad conduct, incompetence, or lack of ability, are to be preferred, provided that they can pass the company's medical examination and that other circumstances are equal. The union, however, is to be permitted to recommend former employees who meet requirements. Workers dismissed without just cause are to receive a dismissal or retirement benefit equal to a month's pay for each year of continuous service and proportionate amounts for parts of a year. Dismissal or retirement benefits are promised to salaried employees or wage earners leaving the company voluntarily after 5 years of service.

*Wages.*—The daily wage was to be increased by 25 centavos,<sup>2</sup> effective May 1, 1944, and after April 1, 1944, an emergency compensation previously granted was to be included in the pay. For an 8-hour night shift the worker was to receive 20 centavos extra and a proportional amount for hours of night work in a mixed shift.

*Vacations.*—The company agreed to continue its practice of giving a paid vacation of 15 working days to salaried employees and 15 calendar days to wage earners, for each continuous year of service. It retained the right to designate the time at which vacation should be taken.

<sup>1</sup> Data are from report of Paul C. Daniels, chargé d'affaires ad interim at the United States Embassy, Bogotá, December 2, 1944; and Memoria del Ministro de Minas y Petróleos al Congreso Nacional en sus Sesiones Ordinarias de 1943 (Bogotá, 1943, pp. 229-301).

<sup>2</sup> A average exchange rate of Colombian peso (100 centavos) in 1944=57 cents.

*Settlement of workers' claims.*—A conciliation and arbitration committee, to consist of three members (one named by the Minister of Labor, Hygiene, and Social Welfare, one by the Tropical Oil Co., and one—a permanent employee of the oil company—by the union), was created to handle workers' claims on matters covered by the agreement. The jurisdiction of the committee was roughly defined as follows:

(1) The harmonious adjustment of workers' claims for compensation in cases of dismissal, vacations, industrial accidents, and sickness. In the last two types of cases the judgment of recognized reputable graduate physicians presented by the parties is to be accepted; the committee serves as the only tribunal on the above-mentioned types of cases, if agreement on them has not been reached by direct negotiation;

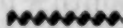
(2) Settlement of individual unionized workers' claims arising from the application and interpretation of the agreement;

(3) The award of indemnities ranging from 2 months' pay for all sicknesses to 12 months' pay for nonoccupational diseases and 18 months' pay for occupational diseases.

The company agreed to continue to study any reasonable complaint of the workers concerning medical service, to carry on its program against venereal diseases, and not to make reprisals against workers who presented the petition which led to the agreement.

*Housing and food.*—The agreement contains the promise of the company (1) to begin construction on additional quarters to lodge all its workers, (2) to pay each worker who lives in Barrancabermeja for whom no housing is available 20 centavos per day until the new construction is completed, (3) not to raise rentals of family dwellings, (4) to see that adequate food is provided by the concessionaires that furnish food in the company kitchens, and (5) to provide medical care for the kitchen workers.

*Company stores.*—The company also promised to carry in its commissariats and sell to its workers, up to July 1, 1946, certain enumerated articles of food and clothing at prices not exceeding those in effect April 1, 1944. Nontransferable cards are to be issued to workers, indicating the size of family for which purchases are to be made. Stores are to be sufficiently stocked with staples, and, if rationing becomes necessary, lists of articles and maximum sale quantities are to be posted.



## Establishment of Labor-Management Committees in France<sup>1</sup>

ESTABLISHMENT of labor-management committees in all French industrial and commercial enterprises habitually employing at least 100 workers was provided for by an act of February 2, 1945. The chief functions of the committees are (1) the consideration of suggestions for improvements which will increase output, and (2) the management of social-welfare activities.

Formation of such committees may be made compulsory by ministerial decrees in enterprises employing fewer than 100 workers and in ministerial offices, liberal professions, and certain other occupations. Other special decrees will determine what public-service occupations

<sup>1</sup>Information is from the Journal Officiel (Paris), February 23, 1945.

will be included and the conditions under which home workers may be counted among employees of an enterprise for the purposes of the legislation.

Under the terms of the law, a labor-management committee is granted broad powers in matters of social welfare and acts as a consultative body in economic questions related to the organization of an enterprise. It is to cooperate with management in working for the improvement of working and living conditions and supervise or assist in the control of projects of a social character. In its consultative role, the committee is to consider workers' suggestions for plant improvements aimed at increasing production and to propose awards for those which prove valuable. It is to study reports (which must be submitted at least once a year by the head of the company) regarding the organization, management, and general condition of the enterprise. A corporation is required to present to the committee a complete financial statement before submitting it to the general stockholders' meeting. Recommendations based on such reports and on workers' suggestions may be made by the committee to the management, and if rejected may be laid before the General Inspector of Industrial Production.

The committee consists of the employer or his representative and from 5 to 8 labor delegates (including 3 to 5 substitutes) representing workers and employees according to the number employed. Delegates must be at least 25 years of age and must have worked 2 years in the enterprise; voters must be at least 18 years of age and must have worked there at least 1 year. The election of labor members is to be held on the basis of nominations submitted by the most representative professional organizations. If the enterprise has several plants, delegates are elected from plant committees to form a central committee which must meet at least once every 6 months.

The election of delegates is by secret ballot and majority vote, supervised by justices of the peace. Penalties are provided for undue interference in elections. The term of office is 3 years, but during the first 3 years of operation the individual term is limited to 1 year. Committee meetings must be called at least once a month by the employer or his representative, and an agenda must be furnished to members at least 3 days in advance of a meeting. If a majority of the committee members so votes, a second meeting may be held during the month. The employer must provide a place of meeting, and each full delegate is entitled to not more than 15 hours of free time with pay, each month, for the performance of his duties.

Labor-management committees created or renewed by collective agreements subsequent to the publication of the law are not affected by it. The provisions of the act may be extended to Algeria by decrees covering one or several professions, through agreement by the Ministers of Labor, of Social Security, of Interior, and of National Economy.

## Industrial Disputes

### Strikes and Lockouts in May 1945

THERE were 425 work stoppages in May 1945, involving 310,000 workers and 2,025,000 man-days of idleness, according to preliminary estimates of the Bureau of Labor Statistics.

Idleness in May was estimated at 0.26 percent of the available working time. More than half of it was due to the stoppage in anthracite mines in eastern Pennsylvania from May 1 to 19. The major stoppages of the month included the anthracite dispute, scattered cessations at bituminous mines, a strike of truck drivers in Chicago, stoppages at the Continental Motors Corp. (Detroit), American Car & Foundry Co. (Berwick, Pa.), and Bethlehem Steel Corp. (Lackawanna, N. Y.). These are referred to in greater detail below. In addition, stoppages at Fruehauf Trailer Co., the Michigan Tool Co. and the Detroit Diesel Engine Division of General Motors Corp., all in Detroit at the Globe-Wernicke Co., Cincinnati, the Gulf Oil Corporation, Port Arthur, Tex., the Mueller Brass Co., Port Huron, Mich., the Jones & Laughlin Steel Co., Pittsburgh and Youngstown Sheet & Tube Co., Youngstown, all contributed materially to the idleness for the month.

The following table includes all known work stoppages caused by industrial disputes which involved six or more workers and lasted as long as a full day or shift. The data cover all workers in any plant who were made idle because of a strike or lockout in that plant, regardless of whether or not they were all directly involved in the dispute.

*Strikes and Lockouts in May 1945, with Comparable Figures for Earlier Periods*

Month	Strikes and lockouts beginning in month		Man-days idle in month	
	Number	Workers involved	Number	Percent of available working time
May 1945 <sup>1</sup> .....	425	310,000	2,025,000	0.26
April 1945 <sup>1</sup> .....	450	285,000	1,330,000	.18
May 1944.....	589	319,040	1,422,571	.18
May 1943.....	412	557,558	1,467,728	.20
May 1942.....	285	68,820	322,085	.05
May 1941.....	463	321,485	2,172,803	.36

<sup>1</sup> Preliminary estimates.

*Anthracite miners' stoppage.*—On May 1 over 60,000 Pennsylvania anthracite miners failed to report for work, after the expiration of their contract on April 30. The strike followed almost a month's unsuccessful negotiations between the United Mine Workers of America

and the anthracite coal operators negotiating committee on a new agreement, and ran counter to a request by the Secretary of the Interior that work be continued and the contract be extended for 30 days pending further negotiations.

Aside from a demand for a 25-percent wage increase, the miners requested shift differentials, vacation pay, and full portal-to-portal pay, identical with those demanded in April by the bituminous-coal miners. On April 26 the National Labor Relations Board conducted a strike ballot under provisions of the War Labor Disputes Act, and a large majority voted in favor of a stoppage.

A proposal for modification of the union's demands, made by the Secretary of Labor, was accepted by the union but was rejected by the operators as more than the industry could afford. On April 30 the dispute was certified to the National War Labor Board. On May 1 the Board ordered the men back to work and provided that any increases in pay would be made retroactive to the expiration date of the old contract. On May 2 the case was referred to the Director of Economic Stabilization, and on May 3 the mines were taken over under Presidential order for operation by the Secretary of the Interior. The miners continued idle. Negotiations were carried on, and on May 19 a new contract was signed, subject to approval (as to wage provisions) by the War Labor Board and (as to price changes) by the Director of Economic Stabilization. A majority of the miners returned to work on May 21. War Labor Board approval of the new contract was given on June 6, price-change approval on June 16, and on June 23 the mines were ordered returned to private operation.

*Bituminous-coal miners' stoppages.*—Scattered stoppages in bituminous-coal mines in May followed the dispute over the contract in April. In some cases the idleness was due to failure of workers to receive notice promptly of approval of price changes by the Director of Economic Stabilization on April 30, upon which the wage provisions of the new contract were contingent, and in others to dissatisfaction of certain groups with specific contract provisions. In addition a number of May stoppages involved supervisory workers in the bituminous mines, part of these being for the purpose of obtaining union recognition.

*Chicago trucking stoppage.*—A stoppage of truck drivers, members of the Chicago Truck Drivers Union (an independent labor organization) and the International Brotherhood of Teamsters, A. F. of L., employed by about 1,200 trucking companies, began in Chicago on May 17. It involved more than 6,000 workers for a few days in May, and a few thousand more when it broke out again on June 16. The stoppage was in protest against the National War Labor Board's approval on May 15 of a Trucking Commission order granting a wage increase of 8 cents per hour for a 51-hour week, but denying other requests, including the overtime provisions of the order, as not allowable under the trucking-industry wage policy agreed upon by the Board and Director of Economic Stabilization in August 1944.

The dispute, involving an original demand for a wage increase of \$5 per week, a 48-hour week, premium pay for inside delivery, vacations, incentive plans, sick leave, etc., had been certified to the Board on January 1, 1945. In April both unions had issued strike notices under the War Labor Disputes Act, but when the WLB order was

received, members of the Chicago Truck Drivers Union, without awaiting the end of the required 30-day period for a strike ballot to be conducted by the National Labor Relations Board, voted to strike. No vote was taken by the A. F. of L. Teamsters but considerable numbers of its members were idle on May 17.

A War Labor Board order to return to work, late on May 17, went unheeded and 3 days later officials of the independent union were summoned to a show-cause hearing in Washington. Officials of the Brotherhood of Teamsters were also invited to attend. Upon refusal of union officials to recommend that the strikers return to work immediately, the Board on May 22 referred the dispute to the Director of Economic Stabilization. Two days later, facilities of the companies whose workers were still on strike were taken over under Presidential order, for operation by the Office of Defense Transportation, aided by the Army. Operations returned to nearly normal and the War Labor Board agreed to reconsider the wage demands.

On June 13 the Board refused to modify its order of May 15. Two days later the National Labor Relations Board conducted a strike ballot among members of both local unions, except those working for companies under Government operation. The result showed a large majority voting in favor of a stoppage. The same day ODT control was expanded in the Chicago area. In spite of Government operation, 10,000 or more workers were on strike on June 16 and remained out until after the Truck Drivers Union had ordered its members back to work June 26.

*Other large disputes.*—Large stoppages occurred (1) at the Continental Motors Corp., Detroit, where approximately 7,000 workers went out in protest against the discharge of several employees who had refused transfers to lower-paid jobs, transfers which the company held were necessary when the Army cut its order for tank motors; (2) at the American Car & Foundry Co., Berwick, Pa., where 1,500 maintenance workers struck, and made an additional 6,000 idle, because of delay in War Labor Board review of an order denying them a wage increase; and (3) at the Bethlehem Steel Corp. plant at Lackawanna, N. Y., where 7,500 workers stopped work in protest when 6 men were laid off because improved methods had reduced the number of workers necessary to man certain operations.

### Activities of U. S. Conciliation Service, April 1945

DURING the month of April 1945 the U. S. Conciliation Service disposed of 1,921 situations as compared with 2,161 situations in March. During April of the previous year 2,232 situations were closed.

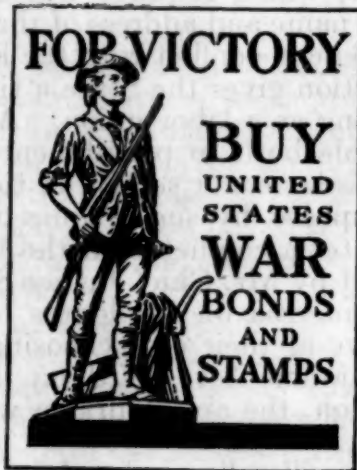
Of the 268 strikes and lock-outs handled, 240 were settled successfully; 28 cases were certified to the National War Labor Board in which strikes occurred during negotiations, but in 15 cases a Commissioner of Conciliation had effected a return-to-work agreement prior to certification of the case. The records indicate that 147 situations were threatened strikes and 1,253 were controversies in which the employer, employees or other interested parties asked for the assignment of a conciliator to assist in the adjustment of disputes.

During the month 364 disputes were certified to the National War Labor Board. The remaining 253 situations included 90 arbitrations, 18 technical services, 27 investigations and 118 requests for information, consultations, and special services.

*Cases Closed by U. S. Conciliation Service in April 1945, by Type of Situation and Method of Handling*

Method of handling	Total	Strikes and lock-outs	Threatened strikes	Controversies	Other situations
All methods.....	1,921	268	147	1,253	253
Settled by conciliation.....	1,304	239	131	934	-----
Certified to National War Labor Board.....	364	129	16	319	-----
Decisions rendered in arbitration.....	90	-----	-----	-----	90
Technical services completed.....	18	-----	-----	-----	18
Investigations, special services.....	145	-----	-----	-----	145

<sup>1</sup> Of these, 15 were settled prior to referral.



# Labor Laws and Decisions

## Recent Decisions of Interest to Labor<sup>1</sup>

### Decisions on State Labor Laws

**FLORIDA union-control law unconstitutional.**—The United States Supreme Court declared that the Florida law controlling labor unions was in conflict with the Wagner Act and therefore void.<sup>2</sup>

Section 4 of the Florida act provided for the licensing of labor union business agents if the board is "of the opinion that the public interest requires that a license or permit should be issued to such applicant." It also requires a \$1 filing fee, 10 years' citizenship, no conviction of felony, and good moral character.<sup>3</sup> By these provisions, in the opinion of the court, it restricts the "full freedom" of choice in selecting a bargaining agent and substitutes Florida's judgment for that of the workers.

Section 6 of the act, which requires the annual filing with the secretary of state of the name and address of the union and its officers, was held by itself not to be in conflict with the Federal act, but failure to comply with this section gives the State a right to have the union enjoined from functioning as a labor union. A union not complying is thus presumably liable both to punishment for contempt and to conviction under the misdemeanor section of the act.

Thus the penalty imposed by such requirements rather than the duty to report constitutes a conflict with the Federal act, making it invalid. As pointed out by Mr. Chief Justice Stone in his concurring opinion, "The right conferred on employees to bargain collectively through a representative of their own choosing is the foundation of the National Labor Relations Act. Without that right, or if it were restricted by State action, the act as drawn would have little scope for operation."

**Compensation for minor illegally employed.**—A boy under 15 years of age was employed in a factory, in contravention of the Texas Penal Code. While working on a planing machine, he caught his fingers in the knives of the machine, losing the end of one and injuring another. An award of damages for this injury was sustained, the Texas Court of Civil Appeals<sup>4</sup> holding that the illegal employment of a minor was negligence as a matter of law, and that his employment, which brought him in proximity to dangerous machines (whether or not he had been

<sup>1</sup> Prepared in the Office of the Solicitor, Department of Labor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law nor to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached, based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

<sup>2</sup> *Hill v. Watson*, — U. S. — (June 11, 1945).

<sup>3</sup> Discussed in *Monthly Labor Review*, February 1945 (p. 335).

<sup>4</sup> *Langston v. Degelia*, 186 S. W. (2d) 738.

warned of the danger) was the proximate cause of his injury. The fact that the employer had believed the boy's statement that he was over age was held to be no defense to the employer, since the statute imposed the duty upon him, and not upon the child, to ascertain the facts concerning the child's age.

### *Labor Relations and Industrial Disputes*

*Right of reconsideration by Board after final court order.*—The National Labor Relations Board required a mining company to cease and desist from certain unfair practices and to reinstate certain employees with back pay. The back-pay formula was based on the mistaken assumption that, because of reorganization of the companies, not all of the men would have been working continuously had there been no unfair labor practices. The mistake was not discovered until after the issuance of the final court order.

The United States Supreme Court in a 5-4 decision took the position that the Board had exercised its discretion and devised a remedy after long deliberation; to permit the Board to resume jurisdiction because of a mistaken understanding would lead to endless litigation and uncertainty in the law. (*International Union of Mine, Mill and Smelter Workers v. Eagle-Picher Mining & Smelting Co.*, 65 Sup. Ct. 1165.) The dissenting opinion was based on the theory that such an order is not final until full compensation has been made and that the rule of reasonableness should control.

*Travel time between portal and face of coal mine is working time under Fair Labor Standards Act.*—The Supreme Court of the United States, in an opinion by Mr. Justice Murphy, held in *Jewell Ridge Coal Corp. v. Local No. 6167, U. M. W. A.*<sup>5</sup> that the time spent by coal miners traveling from the portal of the mine to the working face is time worked and must be included in the workweek for the purpose of computing overtime due under Section 7 of the Fair Labor Standards Act.

The basis for this holding was that the travel took place underground, the miners were subjected to continuous hazard and were obliged to comply with company safety rules in the course of such travel, and in addition, the travel was for the use and convenience of the employer rather than of the miners. These facts, the Court said, brought the case of the coal miners within the rule of *Tennessee Coal & Iron Co. v. Muscoda Local* (321 U. S. 590), in which it was held that underground travel time was worktime within the meaning of the Fair Labor Standards Act.<sup>6</sup>

It was argued in opposition, that the practice, as established in 50 years of collective-bargaining contracts governing coal miners, was not to regard underground traveltime as time worked. The Court, however, said that the length of time during which this had been the practice could not legalize contractual provisions which would frustrate the purposes of the act.

Mr. Justice Jackson in his dissenting opinion, in which he was joined by Mr. Chief Justice Stone, Mr. Justice Roberts, and Mr. Justice Frankfurter, disagreed with the majority's decision that this

<sup>5</sup> 65 Sup. Ct. 1063 (May 7, 1945).

<sup>6</sup> This case was discussed in the Monthly Labor Review for May 1944 (p. 1021).

case was within the rule of the Tennessee Coal & Iron case. He emphasized that the established working day, measured by the length of time spent at the working face of the mine, had been recognized in collective agreements, that travel time was impliedly compensated by the miners' high rates of wages, and that the legislative history of the Fair Labor Standards Act indicated an intent not to interfere with bona-fide collective-bargaining agreements unless clearly illegal. It was the opinion of the dissenting justices, also, that in invalidating the basis of a collective agreement the majority had departed from the previously adopted rule of scrutinizing the factual basis of the contract, in a manner prejudicial to unorganized employees.

*Right of National Labor Relations Board to subpoena bank records.*—The Circuit Court of Appeals decided that in order to determine whether or not a union should be certified, the Board has the right to examine bank records. As between the court and the Board, the Board is the logical tribunal to make the initial determination that a question affecting commerce has or has not arisen. To decide otherwise, said the court, would be to place the burden of investigation on the court rather than on the Board and this would be contrary to congressional intent. (*National Labor Relations Board v. Northern Trust Co.*, 148 Fed. (2d) 24.)

*Subpoenas to compel production of records for Wage-Hour Administrator.*—An application by the Administrator of the Wage and Hour Division for subpoena to compel a newspaper company to produce books and records concerning wages and hours of its employees pursuant to subpoena issued on information and belief, should be granted without requiring the Administrator to show that such company is covered by the Fair Labor Standards Act. (*Walling v. News Printing Co.* 148 Fed. (2d) 57.) Such seizure, the court said, is not without due process of law. The execution of the subpoena rests in the legal discretion of the court and must be exercised in favor of the Administrator under these circumstances.

*Union's delay and refusal to bargain.*—A union certified as collective-bargaining representative does not forfeit its representative status even though it delayed, for more than 3 months, entering into collective-bargaining negotiations with the company. A bargaining agent should be allowed reasonable time within which to familiarize and prepare itself for its duties. (*Motor Value Mfg. Co. v. National Labor Relations Board* C. C. A. 6 Cir., May 14, 1945.)

### *Decisions Relating to Fair Labor Standards Act*

*Reconditioning containers held to be production.*—Employees who recondition used bagging and metal ties are subject to the Fair Labor Standards Act as persons engaged in production for commerce if, after the materials so produced are sold within the State, a substantial portion is used in baling cotton which moves out of the State. The employer who knows or has reason to believe that later shipment of the bags in interstate commerce is intended, violates section 15 (a) (1) of the act if he sells and delivers bags in the production of which the pay provisions of the wage and hour law were violated. (*Walling v. Burch*, — Fed. Supp. —, Apr. 24, 1945.)

*Action on railroad board's order blocked by minority employees.*—In *Griffen v. Gulf & Ship Island R. R.*<sup>7</sup> the Supreme Court of Mississippi decided that a minority group of railroad workers, denied union membership, could prevent enforcement of a union-railroad agreement which was made without notice to them and which prejudiced the seniority rights insured to them under a prior general agreement. This decision was made in spite of the fact that the Railway Labor Board had been called on to decide on the binding effect of the later agreement and had decided that it was permanent and not temporary. The court noted that neither union nor railroad had informed the Board of the existence or provisions of the earlier agreement.

*Original construction of drydock not covered by wage and hour law.*—An employer engaged in original construction of a drydock on a navigable stream was held in *Bruce v. Steers*<sup>8</sup> not to be within the Fair Labor Standards Act. His work was not improving an instrumentality of commerce (the navigable stream), because the drydock has no more effect on the flow of commerce than any waterside building. Although the materials had previously moved in interstate traffic and the employee worked on a float in navigable water, these facts did not supply the essentials for coverage. The court further distinguished between original construction of a drydock and activities connected with its use later, and held the inspection of concrete work on this original construction was neither in commerce nor in production for interstate commerce even though the drydock was intended to produce goods for commerce.<sup>9</sup>

*Practice as trainee on railroad not employment.*—Affirming the decision of the United States district court, the Fifth Circuit Court of Appeals decided in *Walling v. Jacksonville Terminal Co.*<sup>10</sup> that a trainee for railroad engine or switch service, who, while studying the rules of the job in preparation for an examination, is active in the yards while practicing, is not employed by the railroad within the Fair Labor Standards Act. The railroad therefore owes no wages and was not required to obtain a learner's permit for any trainee. The court relied on the written agreement and railroad practices. The court held that the definition of "employ" as "suffer or permit to work" must be read with the common limitation that it involves only work for the benefit of the employer. Further, union approval of the plan and the absence of any relation between the trainee activity and the abuses which the law was intended to remedy strengthened the court's conviction that the work done in training is not employment for which a minimum wage must be paid.

*Supervisory capacity of foreman makes him executive.*—A night foreman at his employer's warehouse, who has supervision of men and authority to do whatever is necessary to operate the warehouse, is a "bona fide executive"<sup>11</sup> within an exemption provided by the Fair Labor Standards Act<sup>12</sup> as distinguished from a "superintendent" who performs menial jobs and has little or no authority.

<sup>7</sup> — S. (2d) —, Apr. 23, 1945.

<sup>8</sup> — Fed. Supp. — (S. D. N. Y.) Apr. 21, 1945.

<sup>9</sup> By definition of "goods," ships are expressly included (29 U. S. C. sec. 203 (1)).

<sup>10</sup> 148 Fed. (2d) 768 (C. C. A. 5).

<sup>11</sup> *Medlin v. Safeway Stores*, 157 Pac. (2d) 907.

<sup>12</sup> Fair Labor Standards Act of 1938, secs. 7, 13 (a) and 16.

*Employees of copartnerships serving interstate trucks in interstate commerce.*—The test of coverage under the Fair Labor Standards Act is not whether the employee's activities affect or indirectly relate to interstate commerce, but whether they are so directly or closely related to commerce as to be a part of it. In *Boutell v. Walling* (148 Fed. (2d) 329), it was shown that the employees serviced all trucks of a company carrying on interstate commerce exclusively. The court held that the fact that they also serviced other trucks doing intrastate commerce was not sufficient to exempt them from the act.

*Picketing of business without employees.*—To be a labor dispute, the dispute must involve some controversy about employment conditions. No dispute exists when a labor union seeks to compel a company, which has no employees, to maintain a contract with the union and pay monthly fees. The constitutional right of free speech does not grant a union the right to picket peacefully for a purpose which is void under the State law forbidding monopolies.<sup>13</sup>

### *Railway Labor Act*

*Court authorized to deal with agreement on railroad work assignments.*—Railroads using a joint terminal brought action for a declaratory judgment to establish their position in regard to a change in an earlier agreement between the railroad workers' unions and the railroads, defining the method for allocating jobs to members of the two unions. A proposed change had proved unsatisfactory to some union members.

The United States district court decided (1) that it had jurisdiction, (2) that the issue was justiciable and not a dispute between carriers and their employees, and (3) that it did not involve a question of union representation (*Tennessee & Pacific R. R. v. Brotherhood of Railroad Trainmen*<sup>14</sup>). The court recognized that labor disputes and representation matters should be decided by the Railway Labor Board, under an exception in the War Labor Disputes Act.<sup>15</sup> The rights of union members objecting to the new agreement, made by their regularly chosen representatives, were held to represent an interest analogous to the constitutional rights of the minority in *Steel v. Louisville & Nash. R. R.* (322 U. S. 722) and *Tunstall v. Brotherhood of Locomotive Firemen and Engineers*, which guided the court in this case.<sup>16</sup>

<sup>13</sup> *Harper v. Brennan*, — (Sup. Ct. Mich., May 14, 1945).

<sup>14</sup> — Fed. Supp. — (W. D. Fla.) Apr. 16, 1945.

<sup>15</sup> 48 U. S. C. sec. 153.

<sup>16</sup> These cases were discussed in Monthly Labor Review, February 1945 (pp. 339 and 341).

## Women in Industry

### Living Costs of Working Women in New York, 1944<sup>1</sup>

TO PROVIDE adequate maintenance and health protection for women workers living as family members in New York State requires \$1,643.53 per annum. This computation, based on the eighth annual survey of the cost of living of working women by the New York State Division of Women, Child Labor and Minimum Wage, in September 1944, represents a 2.7-percent rise in the cost of the working woman's budget as compared with 1943.

It is estimated from previous surveys that women living in furnished rooms and taking their meals in restaurants would need approximately 10 percent more than the above sum.

The budget required under the State minimum-wage law is more than a subsistence budget. In the opinion of the Division, every woman working in the State of New York should have sufficient money to purchase a well-balanced diet. She should have decent sanitary housing, with modern plumbing and electric light. She should be able to purchase the proper type of clothing for maintaining a high morale, in order to compete for and retain her job. She should also have sufficient "money for personal and medical care, insurance, and leisure-time activities, which include recreation, vacation, and education. Furthermore, the budget must also include an allowance for income tax and social-security taxes, otherwise her standard of living will have to be reduced. The estimated figure given above is the minimum for the coverage of these living standards. It excludes luxuries, extremes of any kind, and various desirable items which are in fairly common use, but contains an allowance for the purchase of war bonds in lieu of savings as such."

The most substantial increases in living costs in 1944 were reported in clothing and clothing upkeep and in personal care—rises of 6.5 percent and 7.4 percent, respectively. Clothing costs constitute 15 percent of the working-woman's budget and the rise in such costs is accounted for to a large extent by the lack of low-priced merchandise.

The following table gives an analysis of the cost-of-living budget for a working woman living as a member of a family in certain cities in New York State in September 1944.

<sup>1</sup> Data are from Industrial Bulletin and Employment Review, New York State Department of Labor, Albany, November-December 1944 (p. 338); and Press release, State Industrial Commissioner (New York City), January 30, 1945.

*Cost-of-Living Budget for Woman Worker Living as Member of Family in New York State, September 1944*

City and population group	Total	Housing, including fuel and light	Food	Household expenses and mother's services <sup>1</sup>	Clothing and clothing upkeep	Personal care	Medical care	Insurance <sup>2</sup>	Leisure-time activities	Other living essentials	Income taxes and war bonds
New York State.....	\$1,643.53	\$181.27	\$267.62	\$155.42	\$272.11	\$44.29	\$66.42	\$45.18	\$120.05	\$93.91	\$397.26
New York City.....	1,640.90	178.92	269.52	154.76	270.47	43.96	67.72	45.15	123.86	89.60	396.84
Outside New York City.....	1,649.90	186.95	263.02	157.01	276.08	45.09	63.30	45.24	110.85	104.30	398.06
100,000 and over (except New York City).....	1,647.52	186.36	259.09	156.63	278.32	45.66	62.90	45.22	111.51	104.05	397.78
Buffalo.....	1,682.56	194.04	257.53	160.30	274.87	44.86	66.76	45.37	111.72	115.10	411.81
Rochester.....	1,667.98	201.84	263.95	164.66	283.12	45.42	59.37	45.42	109.46	89.60	405.14
Utica.....	1,603.43	163.20	255.78	144.93	276.96	46.71	62.58	44.77	113.34	107.45	387.71
50,000, under 100,000.....	1,641.31	175.02	265.00	152.23	278.26	44.38	65.50	45.15	111.26	107.45	397.07
Schenectady.....	1,691.25	186.60	263.01	158.56	279.03	46.57	67.17	45.65	116.75	115.10	412.81
Binghamton.....	1,591.35	163.44	266.98	145.90	277.45	42.18	63.82	44.60	105.77	99.80	380.78
25,000, under 50,000.....	1,657.76	188.64	267.01	158.98	274.23	45.26	62.70	45.32	113.13	98.54	403.96
Jamestown.....	1,602.85	176.28	260.17	152.13	275.42	43.84	62.72	44.77	110.27	89.60	387.65
Poughkeepsie.....	1,712.61	201.00	273.85	165.82	273.04	46.68	62.67	45.87	115.97	107.45	420.26
10,000, under 25,000.....	1,661.54	190.08	267.35	157.83	272.56	44.89	63.00	45.36	110.07	106.01	404.39
Glens Falls.....	1,710.07	208.32	274.14	168.56	276.53	42.18	67.70	45.84	110.84	95.98	419.98
Cortland.....	1,577.29	164.04	249.90	143.48	270.39	44.39	60.96	44.51	109.91	110.00	379.71
Oneonta.....	1,697.20	197.88	278.00	161.44	270.75	48.10	60.33	45.71	109.45	112.04	413.50
5,000, under 10,000.....	1,575.07	158.76	259.17	141.75	272.51	45.35	81.21	44.49	108.16	104.21	379.46
Norwich.....	1,591.69	166.68	261.32	145.15	268.80	47.36	63.84	44.66	108.29	104.21	381.38
Canandaigua.....	1,584.03	158.52	265.52	142.41	275.56	45.22	56.76	44.58	110.78	104.21	380.47
Wellsville.....	1,536.88	151.08	250.68	137.09	273.18	43.46	63.02	44.11	105.39	104.21	364.06

<sup>1</sup> Includes household expenses, mother's services and maintenance and household equipment.

<sup>2</sup> Includes allowance for life insurance and Federal old-age insurance.

# Wage and Hour Statistics

## Wages in Pottery Manufacture in East Liverpool (Ohio) Area, October 1944<sup>1</sup>

### Summary

MALE workers in selected occupations in the manufacture of pottery and related products had average straight-time hourly earnings in October 1944 ranging from 67 cents an hour for watchmen to \$1.62 an hour for plastic mold makers. For women workers the averages varied from 52 cents an hour for bisque cleaners to \$1.17 an hour for gilders and liners. Almost three-fifths of the men, but less than a tenth of the women, in the occupations studied earned \$1.00 or more an hour.

### Development of the Industry

The first pottery plant in East Liverpool (Ohio) was erected in 1840 by an English potter, who found ample supplies of suitable clays in and about the region. The quick success of the pottery industry in the area caused a large influx of skilled potters from England and gave rise to most active competition.

The early products manufactured in the potteries of the East Liverpool area were known as yellow ware. The clays available in the locality were of such composition that the ware became a terra cotta red after firing. In 1872, white ware was first manufactured from clays found in other sections of the country. The East Liverpool clays were not adaptable to the manufacture of fine pottery and the use of them was gradually diminished. For many years now, virtually all the clays and mineral substances used by the industry have come from outside the region.

The East Liverpool area on which this report is based includes the cities of East Liverpool, East Palestine, Lisbon, Minerva, Salem, Sebring, and Wellsville in Ohio, and Chester and Newell in West Virginia. The East Liverpool area is one of the great pottery-producing centers of the world. Among the products manufactured are vitreous and semivitreous dinnerware, cooking ware, artware, and porcelain electrical supplies.

Since the beginning of the war, Army and Navy orders have accounted for a large portion of the production of the dinnerware plants. Carloads of cups, saucers, bowls, and sauce boats have been shipped to camps and training stations all over the country.

<sup>1</sup> Prepared in the Bureau's Wage Analysis Branch by Charles Rubenstein (Regional Wage Analyst Cleveland office).

### *Scope of Survey*

Occupational wage-rate and general plant information are presented in this report for 29 potteries, which are believed to be all of the potteries in the East Liverpool area employing 9 or more workers. The data were obtained from pay rolls and other basic records by field representatives of the Bureau. A uniform set of job descriptions was used in order to insure uniformity in the classification of workers in each pottery. The 29 firms employed a total of 10,614 plant and office workers, with individual company employment ranging from 15 to 2,900 workers. Twelve plants with a total force of 9,278 had more than 250 workers each, 11 plants with a total employment of 1,153 had from 51 to 250 workers each, and 6 plants with a total employment of 183 had from 9 to 50 workers.

### *Wage-Payment Practices and Unionization*

The scheduled workweek for both men and women varied from 40 to 48 hours. Seventeen potteries had a work schedule of 40 hours a week, and 8 others one of 48 hours. All 29 potteries reported provisions for the payment of time and a half for all work in excess of 40 hours a week, 7 paying the same premium rate for work after 8 hours in any one day. Eight potteries paid time and a half for work on the sixth consecutive day of work and 4 of these paid double time for work on the seventh consecutive day in a given workweek. Twenty-three potteries had provisions for the payment of premium rates for work on holidays—20 paying double time and 3 paying time and a half.

Of the 10,134 plant workers employed by the 29 potteries surveyed, 9,457 were reported as working on the first or daylight shift, 572 on the second shift, and 105 on the third shift. The late-shift work was confined principally to the operations of kiln firing, placing, and unloading, which usually function on a round-the-clock basis. None of the potteries paid shift differentials for work on either the second or third shifts.

Paid vacations were granted by 20 of the 29 potteries. In each case, the length of vacation was 1 week after a year's service. Workers received vacation pay amounting to 2 percent of their annual earnings, exclusive of payment for overtime work.

Twenty-four potteries, accounting for more than 95 percent of the total workers employed by the 29 potteries studied, had collective-bargaining agreements with the National Brotherhood of Operative Potters, an A. F. of L. affiliate.

*Entrance wage rates.*—Entrance rates of male common laborers who were employed in 25 of the 29 potteries varied from 40 cents to 75 cents an hour. Eighteen potteries had entrance rates of 62 or more cents an hour, while the other 7 had rates ranging from 40 to 57.5 cents an hour. One pottery had provisions for automatically increasing the rate paid to common laborers from 54.4 cents to 68 cents an hour after 30 days of service.

Entrance rates of inexperienced male workers (other than common laborers) ranged from 40 cents to 75 cents an hour. Twenty potteries had entrance rates of 60 cents or more an hour, while the other 9 had rates ranging from 40 to 58 cents an hour. Eight potteries had pro-

visions for automatic increases; the increases varied from 4 cents to 10 cents an hour and were granted after periods of service ranging from 30 days to 3 months.

Entrance rates of inexperienced women workers ranged from 40 cents to 55 cents an hour. Fifteen potteries had entrance rates of 50 cents or more an hour, while the other 14 had rates from 40 to 45 cents an hour. Seven potteries had provisions for automatically increasing these rates. The increases varied from 4 cents to 10 cents an hour and were granted after periods of service ranging from 30 days to 6 months.

### *Average Hourly Earnings*

Wage data were obtained for 5,326 workers employed in 33 selected occupations which are believed to be fully representative of the various skill and earnings levels in the industry. Slightly more than half of the plant workers in the 29 potteries were in these occupations. The wage data in this report refer to straight-time average hourly earnings, exclusive of premium payments for overtime and night-shift work. Incentive payments resulting from piecework are included in the earnings.

The accompanying table reveals that earnings of male workers varied from 67 cents an hour for watchmen to \$1.62 an hour for plastic mold makers. This wide range in earnings is due largely to the incentive method of wage payment and to the varying skill levels found among the men in the industry. Nearly two-thirds of the 2,895 male workers surveyed had average earnings between 99 cents and \$1.59 an hour.

The dispersion in the earnings of women was much less than that of men. Their average earnings ranged from 52 cents an hour for bisque cleaners to \$1.17 an hour for gilders and liners. About nine-tenths of the women were in occupations averaging from 52 to 75 cents an hour. That the average earnings of occupations in which the majority of women were employed were below those for the majority of men may be attributed largely to the fact that men were employed in the higher-paid and more-skilled processing and maintenance occupations. Women were generally engaged in simpler and somewhat repetitive operations, but in some cases performed the more-skilled operations on the moderately priced ware.

The highest and lowest establishment averages are shown for each occupation in the accompanying table. These averages are not necessarily the same as the earnings of individual workers who in some cases had earnings below the lowest establishment averages and, in others, in excess of the highest establishment averages. The large dispersion in earnings between the lowest and highest establishment averages for similar occupations may be attributed to such factors as size of plant, type of product, unionization, and method of wage payment.

Of the 5,326 workers for whom wage data are presented in this report, 2,349 or approximately 44 percent were incentive workers. Two-fifths of the male workers surveyed were paid on an incentive basis. In each of the eight occupations for which wage data are available for both time and incentive workers, the earnings of male incentive workers were higher by amounts varying from 22 cents an

hour for jiggermen to 71 cents an hour for clay makers. Nearly half of the women workers also received incentive earnings. In five of the six occupations for which there are data for both time and incentive workers the earnings of women incentive workers were higher by amounts ranging from 10 cents an hour for gilders and liners to 52 cents an hour for casters. In the occupation of dipper, women time-workers had earnings 6 cents higher than the incentive workers employed in the same occupation. It should be noted, however, that differences in earnings of time and incentive workers are due not only to the methods of wage payment involved, but also in part to inter-plant variations in wage levels, which may be influenced by such factors as type of product, size of plant, and unionization.

*Average Hourly Earnings<sup>1</sup> in Selected Occupations in Manufacture of Pottery and Related Products, East Liverpool (Ohio) Area, October 1944*

Occupation, class and sex	Number of establishments	Number of workers	Straight-time hourly earnings		
			General average	Lowest establishment average	Highest establishment average
Male workers:					
Batters-out.....	13	194	\$0.99	\$0.83	\$1.17
Bisque cleaners.....	2	9	.77	( <sup>2</sup> )	( <sup>2</sup> )
Bunger loaders.....	13	69	1.00	.77	1.54
Board carriers.....	15	75	.73	.55	.90
Carpenters, maintenance, class A.....	2	5	1.38	( <sup>2</sup> )	( <sup>2</sup> )
Carpenters, maintenance, class B.....	4	7	.97	.85	1.09
Casters.....	19	358	1.59	.88	2.10
Clay makers.....	24	66	1.23	.50	1.68
Die pressers.....	7	41	1.00	.71	1.23
Dippers.....	18	77	1.23	.63	1.30
Electricians, maintenance, class B.....	4	7	.93	.90	.95
Finishers.....	7	20	1.02	.91	1.38
Gilders and liners.....	12	191	1.55	1.07	1.95
Glaze mixers.....	11	22	.84	.75	1.15
Inspectors.....	8	145	.88	.75	.88
Janitors.....	17	101	.68	.55	.72
Jiggermen.....	13	284	1.48	1.18	1.70
Kiln drawers (periodic kiln).....	3	19	.71	.65	1.13
Kiln firemen (tunnel kiln).....	13	73	.99	.85	1.05
Kiln placers (periodic kiln).....	5	8	.96	.75	1.08
Kiln placers (tunnel kiln).....	20	399	1.18	.73	1.62
Kiln unloaders (tunnel kiln).....	16	144	.86	.71	1.03
Maintenance men, class A.....	7	12	1.02	.95	1.25
Maintenance men, class B.....	19	95	.87	.70	.92
Mold makers, plastic.....	20	69	1.62	1.00	2.02
Painters, spray.....	10	26	.94	.77	1.30
Pugmill men.....	12	24	.93	.77	1.43
Sorters.....	4	59	.87	.72	1.13
Truckers, hand (ware movers).....	16	174	.73	.65	.78
Ware dressers.....	3	8	.68	.68	.72
Watchmen.....	14	41	.67	.40	.77
Working foremen, processing departments.....	16	73	1.22	.80	1.63
Female workers:					
Batters-out.....	6	49	.79	.70	1.07
Bisque cleaners.....	11	375	.52	.52	.52
Board carriers.....	2	6	.76	( <sup>2</sup> )	( <sup>2</sup> )
Casters.....	7	60	.81	.42	1.32
Die pressers.....	5	24	.75	.47	.86
Dippers.....	10	17	.57	.40	.86
Finishers.....	26	441	.75	.41	.97
Gilders and liners.....	14	194	1.17	.90	1.51
Inspectors.....	2	15	.55	( <sup>2</sup> )	( <sup>2</sup> )
Kiln unloaders (tunnel kiln).....	2	9	.72	( <sup>2</sup> )	( <sup>2</sup> )
Painters, spray.....	3	11	1.05	.61	1.21
Sorters.....	11	142	.54	.40	.72
Transferers.....	16	670	.69	.43	1.07
Truckers, hand (ware movers).....	6	35	.73	.70	.78
Ware dressers.....	15	366	.56	.44	.76
Working forewomen, processing departments.....	10	17	.70	.55	.80

<sup>1</sup> Exclusive of premium payments for overtime and night-shift work.

<sup>2</sup> Low and high plant averages not shown, to avoid identification of individual establishments.

## Trend of Factory Earnings, 1939 to April 1945

THE published average earnings of factory workers are summarized in the accompanying table for selected months from January 1939 to April 1945.<sup>1</sup> The earnings shown in this table are on a gross basis (i. e., before deductions for social security, income and victory taxes, bond purchases, etc.).

Weekly earnings in all manufacturing averaged \$47.16 in April 1945—103.4 percent above the average in January 1939, 77.0 percent above January 1941, and 21.3 percent above October 1942. Such factors as longer hours of work, merit increases for individual workers, premium pay for overtime worked, changing composition of the labor force within plants, shifts in the distribution of workers among plants and among industries, as well as wage-rate increases, account for the rise in earnings.

Gross hourly earnings in all manufacturing averaged 104.5 cents in April 1945—65.3 percent above the average in January 1939, 53.0 percent above January 1941, and 17.0 percent above October 1942.

Straight-time average hourly earnings, as shown in columns 7 to 9, are estimated to exclude premium pay at time and a half for work in excess of 40 hours. The effect of extra pay for work on supplementary shifts and on holidays is included. For all manufacturing, the straight-time average in April 1945 was 97.1 cents per hour; this was 55.9 percent higher than in January 1939, 46.2 percent above January 1941, and 15.7 percent above October 1942.

The shift of workers from relatively low-wage to relatively high-wage industries since 1939 would have raised the average earnings of factory workers, even if no other influences had been present. The effects of such interindustry shifts have been eliminated from the averages shown in columns 10 to 12 of the table. If employment had been distributed between industries as it was in January 1939, the straight-time hourly earnings of factory workers would have averaged 89.9 cents in April 1945, or 44.3 percent above the corresponding average in January 1939, 38.7 percent above January 1941, and 15.0 percent above October 1942. Between March and April 1945 the increase in straight-time hourly earnings, after eliminating the influence of shifting employment, amounted to 0.3 percent. Even this latter series of averages exaggerates the rise in wage rates, because it includes the influence of interplant shifts of employment, merit increases for individual workers, and premium rates for work on extra shifts and on holidays.

<sup>1</sup> Compare Trends in Factory Wages, 1939-43, in Monthly Labor Review, November 1943 (pp. 869-994), especially table 4 (p. 879). For detailed data regarding weekly earnings, see Detailed Reports for Industrial and Business Employment, April 1945, table 6 (p. 175), in this issue.

*Earnings of Factory Workers in Selected Months, 1939 to April 1945*

Month and year	Average weekly earnings			Average hourly earnings			Estimated straight-time average hourly earnings <sup>1</sup>			Estimated straight-time average hourly earnings weighted by January 1939 employment <sup>2</sup>		
	All manufacturing	Durable goods	Non-durable goods	All manufacturing	Durable goods	Non-durable goods	All manufacturing	Durable goods	Non-durable goods	All manufacturing	Durable goods	Non-durable goods
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1939: Jan.....	\$23.19	\$25.33	\$21.57	\$0.632	\$0.696	\$0.583	\$0.623	\$0.688	\$0.574	\$0.623	\$0.688	\$0.574
1940: Jan.....	24.50	27.39	22.01	.655	.717	.598	.644	.703	.589	.635	.697	.589
1941: Jan.....	26.64	30.48	22.75	.683	.749	.610	.664	.722	.601	.648	.711	.600
1942: Jan.....	33.40	38.98	26.97	.801	.890	.688	.762	.835	.670	.729	.810	.667
July.....	36.43	42.51	28.94	.856	.949	.726	.809	.885	.701	.759	.846	.694
Oct.....	38.89	45.31	30.66	.893	.990	.751	.839	.919	.723	.782	.869	.716
1943: Jan.....	40.62	46.68	32.10	.919	1.017	.768	.859	.941	.733	.794	.886	.724
Apr.....	42.48	48.67	33.58	.944	1.040	.790	.878	.959	.751	.808	.897	.741
July.....	42.76	48.76	34.01	.963	1.060	.806	.899	.981	.766	.823	.919	.750
Oct.....	44.86	51.26	35.18	.988	1.086	.824	.916	.997	.781	.836	.929	.765
Dec.....	44.89	50.50	35.61	.995	1.093	.832	.927	1.011	.788	.846	.942	.773
1944: Jan.....	45.29	51.21	36.03	1.002	1.099	.838	.931	1.013	.793	.850	.945	.778
Apr.....	45.55	51.67	36.16	1.013	1.110	.850	.942	1.023	.806	.862	.955	.792
July.....	45.43	51.07	37.05	1.018	1.116	.862	.950	1.035	.815	.874	.973	.799
Oct.....	46.94	53.18	37.97	1.031	1.129	.878	.956	1.038	.829	.881	.969	.815
Dec.....	47.44	53.68	38.39	1.040	1.140	.883	.963	1.046	.832	.886	.975	.818
1945: Jan.....	47.50	53.54	38.66	1.046	1.144	.891	.970	1.053	.840	.894	.984	.825
Feb.....	47.37	53.30	38.69	1.043	1.139	.892	.968	1.048	.842	.892	.978	.827
Mar. <sup>3</sup> .....	47.43	53.25	38.95	1.044	1.140	.896	.969	1.048	.846	.896	.981	.831
Apr. <sup>3</sup> .....	47.16	52.99	38.81	1.045	1.139	.899	.971	1.050	.850	.899	.985	.834

<sup>1</sup> Average hourly earnings, excluding the effect of premium pay for overtime.<sup>2</sup> Average hourly earnings, excluding premium pay for overtime, weighted by man-hours of employment in the major divisions of the manufacturing industry for January 1939.<sup>3</sup> Preliminary.

## Salaries of City School Employees, 1944-45

MEDIAN salaries in city school systems continued in 1944-45 the upward trend which has been in progress in recent years, and for most classes of positions showed substantial increases over the 1930-31 level, the high point reached before the economic depression. The accompanying table, taken from the National Education Association's latest biennial report on these salaries,<sup>1</sup> gives the medians paid in cities of over 100,000 population in 5 school years, 1930-31 to 1944-45, with percentages of change. With a few exceptions, salaries in the smaller cities followed the same general trend in the school year 1944-45 as those in the large cities, although usually they were lower.

With respect to teachers, there is a tendency to pay higher salaries to instructors of older children, in cities of all sizes. In those of over 100,000 population, as the table given here shows, the median for high-school teachers in 1944-45 was \$402 more than for junior high-school teachers, and the median for the latter was \$210 more than for elementary-school teachers. However, the policy of basing salary schedules upon preparation rather than upon school position seems to be growing, 43.2 percent of the schedules reported in the 1944-45 survey being based upon preparation as compared with 36 percent in the 1942-43 survey.

<sup>1</sup> National Education Association Research Bulletin, Vol. XXIII, No. 1, February 1945: Salaries of City School Employees, 1944-45.

## Trends in Salaries Paid to Employees in School Systems of Cities of Over 100,000 Population, 1930-31 to 1944-45

Type of school employee	Median salaries paid in—					Percent of change			
	1930-31	1934-35	1940-41	1942-43	1944-45	1930-31 to 1944-45	1934-35 to 1944-45	1940-41 to 1944-45	1942-43 to 1944-45
<b>Classroom teachers:</b>									
Kindergarten.....	\$2,077	\$1,926	\$2,227	\$2,417	\$2,540	+22.3	+31.9	+14.1	+5.1
Elementary school.....	2,118	1,922	2,268	2,452	2,602	+22.9	+35.4	+14.7	+6.1
Atypical classes.....	2,372	1,996	2,357	2,558	2,690	+13.4	+34.8	+14.1	+5.2
Junior high school.....	2,348	2,078	2,471	2,617	2,812	+19.8	+35.3	+13.8	+7.5
High school.....	2,731	2,436	2,768	2,922	3,214	+17.7	+31.9	+16.1	+10.0
Part-time or continuation school.....	2,695	2,693	2,458	2,835	2,911	+8.0	+8.1	+18.4	+2.7
<b>Department heads:</b>									
Junior high school.....				3,813	3,856				+1.1
High school.....	3,436	2,913	3,536	3,762	4,018	+16.9	+37.9	+13.6	+6.8
<b>Deans:</b>									
Junior high school.....	3,092	2,539	3,043	3,143	3,300	+6.7	+30.0	+8.4	+5.0
High school.....	2,942	2,268	2,677	2,970	3,050	+3.7	+34.5	+13.9	+2.7
<b>Principals:</b>									
Elementary school:									
Assistant principals.....	4,280	4,042	4,621	4,673	4,239	-1.0	+4.9	-8.3	-9.3
Teaching principals.....	2,436	2,135	2,315	2,458	3,809	+56.4	+78.4	+64.5	+55.0
Supervising principals.....	3,519	3,016	3,420	3,499	3,772	+7.2	+25.1	+10.3	+7.8
Junior high school:									
Assistant principals.....	3,496	2,850	3,940	4,138	4,156	+18.9	+45.8	+5.5	+4
Principals.....	4,500	3,718	4,403	4,440	4,657	+3.5	+25.3	+5.8	+4.9
High school:									
Assistant principals.....	5,544	3,453	3,869	3,925	4,167	-24.8	+20.7	+7.7	+6.2
Principals.....	5,100	4,252	4,806	4,939	5,310	+4.1	+24.9	+10.5	+7.5
Part-time or continuation school principals.....	4,111	4,125	4,050	4,000	4,080	-8	-1.1	+7	+2.0
<b>Administrative and supervisory staff:</b>									
Superintendents of schools.....	10,000	7,288	8,605	8,550	9,150	-8.5	+25.5	+6.3	+7.0
Associate, assistant, or deputy superintendents.....	6,527	5,578	6,039	6,088	6,510	-3	+16.7	+7.8	+6.9
Business managers.....	5,361	4,186	4,967	4,570	4,825	-10.0	+15.3	-2.9	+5.6
Directors, assistant directors, or supervisors of—									
Research, tests, etc.....	3,400	2,925	3,333	3,540	3,788	+11.4	+29.5	+13.7	+8.2
Vocational education.....	3,550	3,075	3,667	4,021	4,250	+19.7	+38.2	+15.9	+5.7
Physical education.....	3,100	2,909	3,285	3,400	3,850	+24.2	+32.3	+17.2	+13.2
Health.....	3,167	2,800	2,947	3,270	3,605	+13.8	+28.8	+22.3	+10.2
School library services.....					3,233				
Evening schools.....		3,000	3,275	3,475	3,875		+29.2	+18.3	+11.5
Americanization classes.....	3,240	2,750	3,000	3,150	3,450	+6.5	+25.5	+15.0	+9.5
Art.....	2,867	2,687	3,044	3,192	3,606	+25.8	+34.2	+18.5	+13.0
Music.....	2,909	2,569	3,077	3,090	3,636	+25.0	+41.5	+18.2	+17.7
Penmanship.....	2,933	2,727	2,960	3,100	3,200	+9.1	+17.8	+8.1	+3.2
Manual or industrial arts.....	3,450	3,278	3,480	3,290	3,950	+14.5	+20.5	+13.5	+20.1
Home economics.....	3,219	2,818	3,325	3,300	3,750	+16.5	+33.1	+12.8	+13.6
Visual education.....			3,100	3,450	3,750			+21.0	+8.7
Radio education.....				2,950	3,467				+17.5
<b>Other school employees:</b>									
Secretarial and clerical employees:									
Secretaries to superintendents of schools.....	2,329	1,779	2,107	2,230	2,544	+9.2	+43.0	+20.7	+14.1
Secretaries of boards of education.....	4,450	3,333	3,850	3,950	4,500	+1.1	+35.0	+16.9	+13.9
Clerks in principals' offices.....	1,281	1,147	1,355	1,428	1,643	+28.3	+43.2	+21.3	+15.1
Clerks in other administrative and supervisory offices.....	1,581	1,450	1,628	1,706	1,870	+18.3	+29.0	+14.9	+9.6
Superintendents of buildings.....	4,267	3,109	3,960	3,980	4,417	+3.5	+42.1	+11.5	+11.0
Head janitors.....	2,500	1,564	3,022	3,200	3,500	+40.0	+123.8	+15.8	+9.4
Head nurses.....	2,138	1,875	2,050	2,183	2,700	+26.3	+44.0	+31.7	+23.7
Nurses.....	1,715	1,512	1,764	1,852	2,049	+19.5	+35.5	+16.2	+10.6
Chief attendance officers.....	3,125	2,530	2,967	3,183	3,350	+7.2	+32.4	+12.9	+5.2
Attendance officers.....	2,078	1,888	2,241	2,491	2,518	+21.2	+33.4	+12.4	+1.1

## Wages and Employment in Brazil, 1944<sup>1</sup>

ONLY 43 percent of the 1,300,000 industrial workers registered in the Retirement and Pensions Institute for Industrial Workers in Brazil in August 1944 were earning under 300 cruzeiros<sup>2</sup> monthly, as contrasted with 71.0 percent in October 1942. The number of workers listed by the Institute had increased 3 percent during the same period. The estimated increase in total employment in Brazil from 1941 to 1944 amounted to 2 percent; no change was reported in the total employed in agriculture, which accounted for about two-thirds of all workers in 1944.

### Wage Distribution of Industrial Workers, 1942-44

Between October 1942 and August 1944, the percentage of workers in the Retirement and Pensions Institute for Industrial Workers receiving more than 399 cruzeiros per month increased from 16.0 to 38.5 percent as a cumulative result of minimum wages authorized in 1943.<sup>3</sup> Membership in the Institute was given as 1,311,007 in October 1942 and as 1,350,586 in August 1944.

The distribution of the membership of the Retirement and Pensions Institute for Industrial Workers is shown by earnings groups, for October 1942 and August 1944, in the accompanying table.

*Industrial Workers Registered With Retirement and Pensions Institute of Brazil, by Amount of Monthly Earnings, October 1942 and August 1944*

Monthly earnings	Number of contributors				Cumulative percent	
	In each earnings group—		Cumulative—			
	October 1942	August 1944	October 1942	August 1944	October 1942	August 1944
0 to 99 cruzeiros.....	232,450	84,646	-----	-----	-----	-----
100 to 199 cruzeiros.....	385,071	220,075	617,521	304,721	47.1	22.6
200 to 299 cruzeiros.....	312,818	276,813	930,339	581,534	71.0	43.0
300 to 399 cruzeiros.....	167,163	249,164	1,097,506	830,698	83.7	61.5
400 to 499 cruzeiros.....	89,338	202,771	1,186,840	1,033,469	90.5	76.5
500 to 599 cruzeiros.....	46,670	131,356	1,233,510	1,164,825	94.1	86.2
600 to 799 cruzeiros.....	39,296	101,060	1,272,806	1,265,885	97.1	93.7
800 to 999 cruzeiros.....	14,698	36,792	1,287,504	1,302,677	98.2	96.4
1,000 to 1,499 cruzeiros.....	13,500	29,079	1,301,004	1,331,756	99.2	98.6
1,500 to 1,999 cruzeiros.....	4,263	8,284	1,305,267	1,340,040	99.6	99.2
2,000 and over.....	5,740	10,546	1,311,007	1,350,586	100.0	100.0

### Wages in Agriculture in São Paulo and Northern Paraná

Daily wages for laborers in São Paulo and northern Paraná, without meals, rose from 8 or 9 cruzeiros in 1943 to 12 or 15 cruzeiros in 1944. In the same year daily wages of cotton workers in the region of Catanduva, São Paulo, rose from 8 cruzeiros to 13 or 15 cruzeiros. In the new coffee areas in western São Paulo in 1944, coffee workers were

<sup>1</sup> Data are from reports of Edward J. Rowell, labor attaché, United States Embassy at Rio de Janeiro, November 6 and 22, 1944, and January 16 and February 8, 1945; and of Henry W. Spielman, agricultural economist, United States Consulate at São Paulo, December 9, 1943, and February 1, 1944.

<sup>2</sup> Average exchange rate of cruzeiro, 1942 to August 1944, official=6 cents; free=5 cents.

<sup>3</sup> See Labor Conditions in Latin America, No. 14 (BLS Serial No. R. 1523), and Diário Oficial, Estados Unidos do Brasil (Rio de Janeiro), November 13 and 22, 1943.

receiving 500 cruzeiros per 1,000 trees for taking care of the crop until harvest, or from 300 to 350 cruzeiros for the same work, with the right to plant corn, beans, or rice between the rows of coffee.

While agricultural wages were rising, a movement of labor from older settled regions to new land in the western part of São Paulo and northern Paraná was reported early in 1944. On one coffee plantation near Londrina, most of the families were said to have made enough money on the rice, corn, and beans planted between the coffee trees in 1943 to complete a sizable down payment on farms of their own. Laborers were also leaving agriculture to work in manufacturing.

### *Employment in Brazil, 1941-44*

The increase in total employment in Brazil from 1941 to 1944, according to an official estimate published by the Ministry of Labor, amounted to 2 percent. Although a number of the major employment groups showed rising employment, a decrease in the number of maritime and port, railroad, and transportation workers offset the increase almost completely.

Numbers employed, according to the Ministry of Labor, in agricultural, bank, commercial, industrial, railroad, and other types of work in Brazil in 1941 and 1944 are shown below.

	Number employed in 1944	Number employed in 1941
Total	<sup>1</sup> 13,050,000	<sup>1</sup> 12,808,000
Agricultural and rural industrial	<sup>2</sup> 8,860,000	<sup>2</sup> 8,860,000
Banking	30,000	25,000
Commercial	600,000	500,000
Communications and air transport	15,000	-----
Industrial	1,100,000	956,000
Maritime and port	54,000	55,000
Mining	15,000	-----
Public concessions	116,000	96,000
Railroad	155,000	172,000
Stevedoring	25,000	21,000
Transportation	165,000	210,000
Other	<sup>2</sup> 1,911,000	<sup>2</sup> 1,911,000

<sup>1</sup> Items do not add to total, but are as given in source.

<sup>2</sup> Estimate.

According to the estimate of agricultural employment shown above, agricultural workers accounted for approximately two-thirds of all employment in 1941 and were no more numerous in 1944. Actually the shortage of farm labor was reported to be so great in the State of Rio de Janeiro that "many holdings were being abandoned." The greatest decreases in employment shown for the period were in transportation workers (22 percent), railroad workers (10 percent), and maritime and port workers (2 percent). These groups, however, made up but 3.4 percent of all employed in 1941.

The largest increases in employment occurred in public concessions (21 percent), banking (20 percent), commercial (20 percent), stevedores (19 percent), and industrial workers (15 percent). In 1941 these groups accounted for 12.5 percent of all employment—commercial workers numbering 500,000 and industrial workers 956,000.

## Hours and Earnings in Canada, November 1944 and March 1945<sup>1</sup>

IN March 1945, statistics of man-hours and hourly earnings in Canada were published for the first time in Canadian history. The figures represented the initial release in a series to be issued regularly. First results were for November 1, 1944, at which time, in manufacturing, average hours were 46.3 and hourly earnings were 70.3 cents. Non-manufacturing hours reported were 46.1 in mining, 42.8 in building construction, and 35.0 in highway construction. Hourly earnings in the same industries averaged 84.6, 80.6, and 62.3 cents, respectively.

Weekly earnings were also computed, by multiplying hours by hourly earnings. These weekly earnings, however, were not so comprehensive as those of the regular survey of employment and pay rolls, although they were collected from the same firms. The data based on hours and hourly earnings covered only those regularly and casually employed wage earners for whom a count of hours worked was kept. It was recognized that employers would not maintain records of man-hours for certain classes of workers, i. e., salaried employees and particular categories such as route drivers, some piece workers, etc. Collection of the regular employment and pay-roll statistics covering all classes of workers was to be continued, in addition, to maintain the continuity of that series.

The smaller sample related generally to the last week in the month. Overtime hours and earnings were included, as well as hours and earnings of part-time and casual workers. When employees were absent on vacation with pay, vacation hours and the payments made therefor were counted in the statistics. Incentive and production bonuses were also covered. The sums reported represented the gross earnings before deductions were made for taxes, unemployment insurance, etc.

The accompanying table gives preliminary statistics of average hours worked, average hourly earnings, and average weekly wages, as of November 1, 1944, and March 1, 1945. Coverage was extended to manufacturing,<sup>2</sup> mining, and building and highway construction; according to the Dominion Bureau of Statistics, the data tabulated for the other industries did not prove satisfactory, for various reasons, and publication was postponed. The figures covered manufacturing wage earners representing approximately three-quarters of the combined total of all wage earners (including those for whom man-hour data were not available) and salaried workers in manufacturing; there was considerable variation in the coverage in different manufacturing industries, depending on the proportion of an industry's workers in the groups for which man-hour records could not be kept and also on the number of employers who furnished the requested information.

Earnings varied considerably between industries. Such variation was due partially to difference in overtime worked (e. g., earnings in the durable manufactured goods industries contained payment for a relatively greater amount of overtime than those in the nondurable

<sup>1</sup> Data are from Statistics of Man-Hours and Hourly Earnings as at November 1 and December 1, 1944, and January 1, February 1, and March 1, 1945 (Department of Trade and Commerce, Ottawa, 1945).

<sup>2</sup> Excluding electric light and power; employment and pay-roll statistics include this group.

manufactured goods industries). Employers in the light manufacturing industries were unable to furnish information for piece workers, whose earnings were stated to be higher than those reported. The industries in which earnings were highest employed large numbers of skilled workers and a high proportion of males. Relatively large differences existed in hours worked. In addition, the firms reporting in the different months were not always the same.

Little month-to-month variation in hourly earnings occurred during the period covered. Such variation as existed was caused largely by fluctuations in the amount of overtime and to a less extent by shifts in the firms reporting for the months covered. Average hours also did not vary a great deal, with the exception of a decline in December reflecting observance of the Christmas holiday. It was stated that the latter decrease was not greater because many firms paid employees for Christmas time off; such hours granted as leave with pay were included as if the time had been worked.

*Average Hours Worked and Average Hourly and Weekly Earnings of Canadian Wage Earners, November 1, 1944 and March 1, 1945<sup>1</sup>*

Industry	Average weekly hours		Average hourly earnings		Average weekly earnings	
	Mar. 1, 1945	Nov. 1, 1944	Mar. 1, 1945	Nov. 1, 1944	Mar. 1, 1945	Nov. 1, 1944
Manufacturing <sup>2</sup>	45.8	46.3	Cents 70.1	Cents 70.3	\$32.11	\$32.55
Durable manufactured goods	46.5	47.0	77.8	77.7	36.18	36.52
Nondurable manufactured goods	45.0	45.3	60.3	60.1	27.14	27.23
Animal products, edible	45.4	45.3	62.6	61.7	28.48	27.95
Dairy products	47.1	47.6	60.0	58.6	28.26	27.89
Meat products	44.5	44.4	66.3	65.3	29.50	28.99
Leather products	44.3	44.0	51.4	51.6	22.77	22.70
Leather tanning and finishing	46.5	46.0	62.5	63.4	29.06	29.16
Leather boots and shoes	44.8	44.1	49.2	49.0	22.04	21.61
Lumber and products	45.2	45.4	60.6	61.0	27.39	27.69
Rough and dressed lumber	45.6	45.7	62.2	62.5	28.36	28.56
Containers	44.4	43.9	58.0	58.3	25.75	25.59
Furniture	44.6	45.2	57.8	57.6	25.78	26.04
Plant products, edible	43.8	42.1	53.2	52.8	23.30	22.23
Flour and other milled products	47.9	46.8	61.8	63.0	29.60	29.48
Fruit and vegetable preserving	43.7	40.7	48.6	48.9	21.24	19.90
Bread and bakery products	43.9	44.0	52.0	50.0	22.83	22.00
Chocolate and cocoa products	40.1	37.5	48.6	49.9	19.49	18.71
Pulp and paper products	46.4	47.8	69.1	68.4	32.06	32.70
Pulp and paper	50.0	51.7	71.5	69.8	35.75	36.09
Paper products	43.8	42.8	54.7	57.4	23.96	24.57
Printing and publishing	41.8	42.2	74.5	73.1	31.14	30.85
Rubber products	45.0	45.2	73.1	72.4	32.90	32.72
Textile products	44.1	44.6	50.5	49.8	22.27	22.21
Thread yarn and cloth	47.7	47.9	48.4	48.7	23.09	23.33
Cotton yarn and cloth	47.9	48.1	48.2	48.1	23.09	23.14
Woollen yarn and cloth	47.2	47.1	49.0	49.2	23.13	23.17
Silk and artificial silk goods	48.3	48.3	48.4	50.0	23.38	24.15
Hosiery and knit goods	43.1	43.0	46.4	45.7	20.00	19.65
Garments and personal furnishings	40.7	41.1	54.7	52.0	22.26	21.37
Tobacco	45.2	44.3	50.9	47.4	23.01	21.00
Beverages	44.6	46.2	66.2	64.5	29.53	29.80
Distilled and malt liquors	44.4	46.1	68.3	65.8	30.33	30.33
Chemicals	46.1	46.1	67.4	66.2	31.07	30.52
Explosives and ammunition, not elsewhere specified	46.7	46.7	68.1	65.8	31.80	30.73
Acids, alkalis, and salts	47.6	47.5	75.9	73.5	36.13	34.91
Clay, glass, and stone products	46.4	47.5	63.7	63.6	29.56	30.21
Clay-products manufacturing	45.4	46.3	57.3	60.0	26.01	27.78
Glass products	46.6	46.5	61.1	60.4	28.47	28.09
Stone products	46.8	49.4	70.9	70.0	33.18	34.58
Electrical apparatus <sup>3</sup>	44.7	46.1	70.9	67.7	31.69	31.21

See footnotes at end of table.

*Average Hours Worked and Average Hourly and Weekly Earnings of Canadian Wage Earners, November 1, 1944 and March 1, 1945<sup>1</sup>—Continued*

Industry	Average weekly hours		Average hourly earnings		Average weekly earnings	
	Mar. 1, 1945	Nov. 1, 1944	Mar. 1, 1945	Nov. 1, 1944	Mar. 1, 1945	Nov. 1, 1944
Manufacturing—Continued.			<i>Cents</i>	<i>Cents</i>		
Iron and steel products.....	47.0	47.5	82.0	82.3	\$38.54	\$39.09
Crude, rolled, and forged products.....	47.3	47.7	76.9	77.7	36.37	37.06
Machinery (other than vehicles).....	49.2	48.7	71.6	74.4	35.23	36.23
Land vehicles and aircraft.....	46.6	47.1	87.5	86.3	40.78	40.65
Automobiles and parts.....	46.0	46.0	94.0	94.7	43.24	43.56
Airplanes and parts.....	47.0	47.2	84.3	82.4	39.62	39.06
Steel shipbuilding and repair.....	45.7	47.7	86.4	88.7	39.48	42.31
Iron and steel fabrication, not elsewhere specified.....	48.7	48.2	81.0	80.0	39.45	38.56
Tool manufacturing.....	47.3	47.5	74.6	73.4	35.29	34.87
Firearms.....	50.4	48.6	81.5	79.9	41.08	38.83
Foundry and machine shop.....	48.6	47.5	76.7	75.9	37.28	36.05
Sheet-metal work products.....	45.1	45.6	65.7	66.9	29.63	30.51
Nonferrous-metal products.....	46.1	45.9	73.9	73.3	34.07	33.64
Preparation of nonferrous-metallic ores.....	48.0	46.4	74.4	77.2	35.71	35.82
Aluminum and its products.....	46.0	45.3	74.9	74.0	34.45	33.52
Copper, lead, tin, and zinc.....	45.6	46.6	74.6	72.2	34.02	33.65
Nonmetallic mineral-products manufacturing.....	46.2	46.0	78.6	79.5	36.31	36.57
Petroleum and its products.....	45.1	44.9	84.1	85.5	37.93	38.39
Miscellaneous manufactured products.....	43.6	44.4	67.1	68.5	29.26	30.41
Mining.....	45.9	46.1	83.7	84.6	38.42	39.00
Coal.....	43.8	44.2	93.2	94.0	40.82	41.55
Metallic ores.....	47.0	46.5	82.0	83.8	38.54	38.97
Nonmetallic minerals (except coal).....	47.4	49.6	67.1	67.0	31.81	33.23
Building construction.....	41.4	42.8	82.1	80.6	33.99	34.50
Highway construction.....	40.6	35.0	64.8	62.3	26.31	21.81

<sup>1</sup> Average exchange rate of the Canadian dollar = 90.9 cents.

<sup>2</sup> Durable goods group included iron and steel, nonferrous metals, electrical apparatus, lumber, musical instruments, and clay, glass, and stone products; the nondurable group included the remaining manufacturing industries.

<sup>3</sup> A subgrouping "heavy electrical apparatus" covering workers in eight industries was later introduced; in March, hours for this group averaged 44.4, hourly earnings 79.7 cents, and weekly earnings \$35.39.



## Industrial Real Wages in Colombia, 1938-44<sup>1</sup>

INDEXES reflecting the trend of living costs, the purchasing power of the peso, money wages, and real wages in Colombia from 1938 to 1944 show that although money wages rose 37.3 points 1941 to 1944, the purchasing power of the peso during this period dropped 30.1 points and real wages (in terms of cost of living) dropped 8.6 points. The nation, however, was reported to be enjoying a wave of prosperity, probably because of the conditions of relatively full employment.

The indexes measure conditions for a workingman's family living in Bogotá. In spite of the variety of economic circumstances that may exist simultaneously in different parts of Colombia, increased employment, rising prices, and industrial expansion were reported in February 1945 to be characteristic of the whole country.

The table below shows indexes for cost of living, purchasing power of the peso, money wages, and real wages, 1938 to 1944.

<sup>1</sup> Data are from report of Harry Stark, senior economic analyst, United States Embassy, Bogotá, February 15, 1945, and certain confidential sources.

*Indexes of Money Wages and Real Wages, Cost of Living, and Purchasing Power of  
Peso, Colombia, 1938-44*

Year	Indexes (1938=100) of—					Indexes (1937=100) of—	
	Money wages			Real wages in relation to—		Cost of living	Purchasing power of peso
	Women	Men	Average	Cost of living	Market food prices		
1938.....	106.9	107.3	104.8	110.4	103.1	113.4	88.2
1939.....	108.2	110.4	106.7	109.5	92.9	118.4	84.5
1940.....	113.0	110.5	108.0	114.4	103.4	114.6	87.2
1941.....	118.6	112.4	106.7	114.7	105.3	113.0	88.5
1942.....	129.0	113.7	115.5	114.2	99.4	122.8	81.5
1943.....	149.8	127.0	131.0	111.8	96.6	142.3	70.3
1944.....	<sup>1</sup> 172.4	<sup>1</sup> 138.1	<sup>1</sup> 144.0	<sup>1</sup> 106.1	<sup>1</sup> 89.1	<sup>2</sup> 171.2	<sup>2</sup> 58.4

<sup>1</sup> Based on data for first half of 1944.

<sup>2</sup> As of June 30, 1944.

The indexes of real wages shown in the table were derived from a calculation of wage rates for specific jobs and not from earnings. Earnings of individuals may have increased considerably more. After 1941, industrial expansion in Colombia created new jobs at all skill levels. Experienced workers advanced in grade; new workers entered at the bottom of the scale.

The textile industry, for example, recruited "thousands of Colombian women who never held wage jobs before." In 1943, the average daily wage in the industry in the Department of Caldas was reported as 1.50 pesos<sup>2</sup> for a 10-hour day; in the Department of Santander women operating looms received 8 pesos a week, and male operators of automatic looms, from 15 to 20 pesos. According to report of February 1945, a Colombian textile-helper's job paid 1 peso per day, spinners received 2.50 pesos, and chiefs of sections, 5 pesos daily. The industry was working 3 shifts of 8 hours each, generally employing women for the day and men for the night shifts.

Similar conditions prevailed in the petroleum industry. Workers recruited from agriculture had been earning in the Department of Cauca, in 1943, an average of 0.35 peso per working day, and laborers in coffee fields in Santander, from 30 to 50 centavos daily, with food. Workers in the oil fields began as laborers at 2.45 pesos per day.

Expansion in other fields indicated similar opportunities for employment. During the years 1941 to 1944, the indexes of production of sugar and electric power rose from 197.0 to 250.2 and from 303.9 to 367.6, respectively (January 1933=100); cement production increased 12.0 percent; and savings bank deposits, 162.0 percent.

<sup>2</sup> Average exchange rate of peso in 1943 and to November 1944=57.2 cents.

## *Wage and Hour Regulation*

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### **Wage Order for Puerto Rican Cigar and Cigarette Industry<sup>1</sup>**

UNDER the terms of the Fair Labor Standards Act, the Secretary of Labor fixed minimum pay at 30 cents an hour for employees in the cigar and cigarette industry of Puerto Rico. The minimum wage became effective on July 16, 1945, for any employee in the industry who is engaged in commerce or in the production of goods for commerce in the manufacture of cigarettes, cigars, cheroots, and little cigars, including the stemming of cigar wrappers or binders by a cigar manufacturer.

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### **Five-Day Week in Australia<sup>2</sup>**

IN COMMENTING on the relative merits of a 44-hour workweek, distributed over 5 days from Monday to Friday or over 5½ days from Monday to Saturday, the Commonwealth Arbitration Court of Australia stated that the 5-day practice was very generally observed, and to extend it to the remaining portion of industry would not entail any innovation that would be incompatible with Australia's war commitments. However, the Court restated its general principle that it would "not interfere with an employer's right to regulate his own business unless in his regulation of it he imposes unjust or unreasonable demands upon his employees," and could find no justification for departing from this principle by ordering the general application of the 5-day week in employment.

The Court referred to the natural desire of workers for a reduction in the number of days of work, stating that by arranging leisure in the most effective manner, the worker had more time for recreation, rest, and cultural pursuits. However, this desire to some extent must be subordinated to the proper requirements of the community as a whole and care must be taken to prevent the rearrangement of working hours from interfering with the sources of employment. The 5-day week should not be permitted to interfere with the public or national interest by impairing efficiency, or reducing production, or in other ways.

In the opinion of the Court, the merits and advantages of the 5-day week to employees outweigh those of the 5½-day week, in that the time and expense of traveling to and from work are reduced, and the housekeeper is relieved from preparing and serving a meal at an early hour.

<sup>1</sup> U. S. Department of Labor, Wage and Hour Division, Press release No. D-103, New York, May 17, 1945.

<sup>2</sup> Information is from *Employers' Review* (Sydney, Australia, Employers' Federation of New South Wales), January 31, 1945.

To the objection that the shorter workweek would raise labor costs in instances when overtime work was required, the Court showed that an employer is not obliged to increase his costs under a 5-day standard schedule. Awards regulating overtime prescribe time and a half for the first 4 hours of overtime and double time thereafter, each day's overtime being considered separately. Therefore, 4 hours might be worked at time and a half on all weekdays including Saturday, permitting a maximum of 24 hours of overtime weekly at time and a half, regardless of whether the 5-day or the 5½-day week was the standard. With respect to efficiency, the Court held that there is little, if anything, to choose between the two systems. The lengthening of the workday from Monday through Friday would be offset by the week-end break and (in a 5½-day week) also by the shorter working period on Saturday.

If the maximum of 56 hours permitted under the National Security (Hours of Work) Regulations were spread evenly over 5 days, daily working time would be 11 hours 12 minutes; if 4 hours were worked on Saturday, the daily working time (Monday through Friday) could be reduced to 10 hours 24 minutes. The Court stated that the 5-day plan had the advantage of allowing 2 free days weekly to the worker, but it could not be said that one system is more conducive of fatigue than the other, and the opportunities of increasing or reducing fatigue would appear to be the same under either system.



### Regulation of Home Work in Cuba<sup>1</sup>

REGULATIONS governing the conditions of employment of women performing industrial home work were promulgated by the Cuban Government on May 3, 1945.<sup>1</sup> This action repealed all previous regulations on the subject, and regulated the application of decree law No. 598 of October 16, 1934, which is the basic law governing the employment of women in industry.<sup>2</sup> Industrial home work (performed by women particularly in the manufacture of articles of clothing, hats, and cardboard containers) was defined in the decree of May 1945 as work performed by women in their places of residence for the account of one or more employers and for remuneration. Employers are required to maintain a register of such employees, listing for each worker her name, the place where the work is performed, the type of work, and the rate and amount of remuneration. Employers are further required to provide each such worker with a card containing similar information.

These employers are required to fix a day and hour for the delivery and receipt of the materials and work, previously notifying the Ministry or the Provincial labor offices as may be the case, of the aforementioned dates. In no case is the woman worker to be made to wait more than a half hour for the delivery or receipt of work, or for the payment of her wages. She is to be compensated for any excess over that time by payment proportional to the work which she has performed.

<sup>1</sup> Data are from Consular Report No. 203, prepared by Eugene Desvernine, United States Embassy at Habana, May 10, 1945, and *Gaceta Oficial* (Habana), May 3, 1945.

<sup>2</sup> See *Monthly Labor Review*, January 1935 (p. 100); and *International Labor Office, Legislative Series* 1934, Cuba 10.

Before commencing activities in this type of work, every employer is required to obtain a license procurable without charge from the Ministry of Labor upon application. The application is to contain a description of the conditions and circumstances under which the work is performed; name and type of material delivered and of the articles made therefrom; whether the manufacture of the article is partial or total; and whether the worker receives all or part of the material involved, or whether it is furnished partly by the worker.

In addition, the employer must state, under oath, the following: The daily task assigned to each worker; the adjusted price; any deductions for maternity insurance; the number of accident-insurance policies taken out for the protection of home workers; the amount paid for vacation time; and the proportion to which the worker is entitled, at the rate of 48 hours of wages for 44 hours of work. - Health certificates for the workers must be presented by the employer.

All licenses issued prior to this decree were revoked. At the same time a period of 30 days was granted from the date of official publication of the decree, within which the interested parties were required to apply for new licenses, fulfilling the requirements set forth above.

Contracts for industrial home work are to be made only on the terms that prevail for workers in shops and factories. In addition, every worker on home work is to be considered as a worker or employee of the enterprise of her respective employer, with all the rights and benefits granted by the social laws in force.



### British Wages Councils Act, 1945<sup>1</sup>

THE Wages Councils Act, designed to insure minimum wage standards and at the same time to support "the voluntary principle" in fixing terms of employment in British industry, received royal assent on March 28, 1945. Under the terms of the legislation, provision was made for reenactment of the Trade Boards Acts of 1909 and 1918, renaming the trade boards "wages councils," and bringing their powers into line with those of similar bodies subsequently established by law. Additional powers were granted, permitting establishment of a wages council in conformity with a recommendation of a commission of inquiry, if such a commission is of the opinion that the voluntary machinery is inadequate or likely to become so and that as a result a reasonable standard of remuneration is not being or might not be maintained. Employers are obligated under the act to provide, until the end of 1950, terms and conditions of employment not less favorable than the "recognized terms and conditions" in the same industry in the district; further extension depends on action by Parliament.

In discussing the proposed law, the Minister of Labor and National Service stated that he first considered amendment of the Trade Boards Acts, but decided that the purposes would be made clearer to the House of Commons and the public if the legislation were replaced.

<sup>1</sup> Information is from Great Britain, Parliament, Wages Councils Act (ch. 17, 1945); Ministry of Labor Gazette (London), December 1944; British Information Services (New York), British Speeches of the Day, February 1945; Labor and Industry in Britain, March 1945; press release No. L 152, January 21, 1945; and cable from J. G. Winant, United States Ambassador, London, dated March 31, 1945.

The underlying principle of the Trade Boards Acts—to allow autonomous boards representative of employers and employees in the industries concerned to fix legally enforceable standards—remains in the new legislation. By a change in name, the Minister added, Parliament was declaring that the conception of what was known as sweated industry is superseded. Whereas the trade boards were empowered to establish minimum hourly rates of remuneration, the wages councils have the power to fix a guaranteed wage.

Of the 52 trade boards formed, 48 had exercised their powers, the Minister said. Two of the remaining 4 were largely in home-work trades in which it was difficult to fix conditions; in the other 2 industries, establishment of voluntary agreements made statutory provisions unnecessary. The trade-boards legislation of 1918 was followed by enactment of the Agricultural Wages Act in 1924, the Road Haulage Wages Act in 1938, and the Catering Wages Act in 1943. In addition, approximately 10 million workers had their wages and conditions of employment fixed by collective agreement in 1939, and 40 joint industrial councils (including 7 industrial councils for the distributive trades) were established during the war. Taking into account all persons protected by existing provisions, and the effects to be obtained by the Wages Councils Act, the Minister estimated that the overwhelming majority of the working force (in all, over 15,000,000) would be covered.

### *Establishment of Wages Councils*

All orders for the formation of wages councils are to be promulgated by the Minister of Labor and National Service. Such councils may be established only if needed; notably, (1) if the Minister is of the opinion that no adequate machinery exists for the effective regulation of the pay of any workers, or if it is expedient owing to the existing level of wages among those workers, or (2) on recommendation of a commission of inquiry, if the commission is of the opinion that voluntary machinery is not and cannot be made adequate or has ceased or is likely to cease to exist or to be adequate, and that consequently a reasonable standard of wages is not being or will not be maintained.

An application for the formation of a wages council may be made to the Minister of Labor either by a joint industrial council or similar body or by the joint action of organized employers and trade-union bodies that habitually take part in the settlement of wages and employment conditions of the workers concerned. In the discretion of the Minister, such an application may then be referred to a commission of inquiry, but, if other organizations would be affected by the establishment of a wages council, the Minister must notify them and consider their observations before referral of the application. Even in the absence of an application, the Minister is empowered to refer to a commission of inquiry the question of establishing a wages council, if he deems it desirable.

A commission of inquiry is appointed ad hoc to deal with a particular case, its membership consisting of not more than three independent persons and not more than two representatives each of employers and workers. Whatever decision the commission may reach must be reported to the Minister of Labor, who, as stated above, will take the necessary measures. However, before the Minister makes an order,

either on his own initiative or in pursuance of a recommendation by a commission of inquiry, he must publish notice of the intended action. If substantial objection is voiced, the Minister must either amend the draft order and publish the amended draft, or refer the objections to a commission of inquiry, unless the objections have already been considered and expressly dealt with. After considering any report made by the commission on such a reference, the Minister is empowered to order the creation of a wages council. He must publish the report of any commission of inquiry and the wages council order at the same time, and submit both to Parliament. Within 40 days, the order may be annulled by either House of Parliament.

Under the terms of the legislation, the Minister of Labor is authorized to abolish or change the scope of operation of a wages council. He may appoint a central committee, if coordination of the work of two or more councils seems desirable. Such action may be taken on recommendation from a commission of inquiry or on the Minister's own initiative, after consultation with the councils concerned.

### *Wage-Regulation Orders*

Broader powers are delegated to wages councils than to the trade boards which they replaced. With respect to the pay of workers, they may recommend the fixing of "statutory minimum remuneration" instead of "minimum rates of wages." The difference lies in the power of the wages councils to establish a guaranteed weekly wage,<sup>2</sup> whereas the trade boards were empowered to fix a minimum hourly wage rate only. Wages councils may also prescribe paid vacations longer than the 1 week that trade boards were permitted to authorize.

Wage-regulation proposals of a wages council must be published, and any written representations made within a specified period must be considered. When the Minister of Labor makes a wage-regulation order, he must follow the wages council's proposals, subject to his right to require the council to reconsider its action.

For noncompliance, an employer, on conviction, is subject to the imposition of a fine for each offense.

### *Observance of Collective-Agreement Terms*

Until December 31, 1950, employers are obliged to observe terms and conditions of employment not less favorable than the "recognized terms and conditions" established by agreements between employers' organizations and trade-unions representative of substantial proportions of employers and workers engaged in that trade or industry in the district concerned. Any further extension of this obligation is to depend upon action by Parliament. The principle of making generally applicable the standards reached by collective agreement was designed to give support to joint voluntary machinery in the transition from war to peace. This action involves a continuation, with minor modification, of part III of the Conditions of Employment and National Arbitration Order adopted in 1940, to come into operation when the order ceases to have effect.<sup>3</sup>

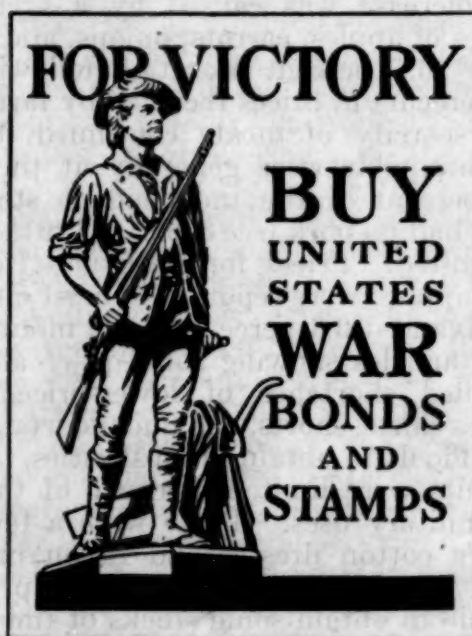
<sup>2</sup> As a war measure, guaranteed wages were assured for a large segment of labor under the terms of the Essential Work (General Provisions) Order of 1941; see Monthly Labor Review for July 1943 (p. 22).

<sup>3</sup> The 1940 order was summarized in the Monthly Labor Review for March 1942 (p. 601).

The foregoing obligation does not apply to those workers whose remuneration or minimum wage is fixed under the Agricultural Wages Acts of 1924-40, the Road Haulage Wages Act of 1938, the Catering Wages Act of 1943, or the Education Act of 1944.

Any disputed question not otherwise settled will be referred to the Industrial Court rather than to the National Arbitration Tribunal, as the latter body will cease to function when the Conditions of Employment and National Arbitration Order is revoked.

In contrast with the provisions for the enforcement of the orders under the part of the law dealing with wages councils, no penalties were incorporated into the law for noncompliance with the standards fixed by collective agreements. However, a decision of the Industrial Court will become an implied term of the agreement.



## *Cost of Living and Retail Prices*

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### **Cost of Living in Large Cities, May 1945**

HIGHER prices for foods, particularly fresh fruits and vegetables, accounted for the greater part of the 0.7-percent rise in retail prices of living essentials during the month ending May 15, 1945. Costs of clothing also advanced, with continued shortages of lower-priced lines. The increase from April to May constituted the largest monthly rise since May 1943. The Bureau of Labor Statistics cost-of-living index for May 15, 1945, was 128.0 percent of the 1935-39 average, and was the highest level reached by the Bureau's index during the war; it was 2.3 percent above the level of May 1943, when the President's "hold-the-line" order became effective. Food costs, however, were 2.9 percent lower than in May 1943.

Average retail food costs rose 1.6 percent during the month, primarily as a result of a 6.4-percent advance in prices of fresh fruits and vegetables. That increase was caused by a greater-than-seasonal advance in the prices of apples, carrots, onions, and potatoes. Onion prices in May rose 36.5 percent at retail, following the unusually large increase (50 percent) in prices received by farmers in April.

The widespread scarcity of meats continued, but the prices of meats that were obtainable were generally at the same level as in April. About 70 percent of the independent stores had no beef, and over 80 percent had no pork (see table, p. 129). Supplies of other meats were also limited. Prices for fresh and frozen fish rose 3.6 percent; adequate supplies were reported in most cities.

Clothing costs advanced 0.3 percent in the month ending May 15, with most clothing articles showing small price advances, primarily because of continued shortages of lower-priced staple clothing. Work shirts, business shirts, shorts, and undershirts, as well as women's rayon hose, were difficult to obtain in most cities. Supplies of men's tropical worsted suits were limited, because of the diversion of all worsted yarns to military uses. There were a few minor price decreases for women's cotton dresses and rayon underwear, and for men's undershirts. In a few stores lower apparel prices were reported, as retailers were able to obtain some stocks of the lower-priced lines.

Average retail prices of housefurnishings and miscellaneous goods and services rose slightly (0.1 percent) between mid-April and mid-May. Scattered increases were reported for Axminster rugs, furniture, and cook stoves. The initial application of the new OPA formula for determining price ceilings at the retail level (MPR No. 580, effective May 4) was reflected in lower prices for bedroom furniture in a few stores and slightly higher prices in a few stores. Prices for sheets were higher over the month.

Fuel, electricity, and ice costs rose 0.2 percent, reflecting an average increase of 16 cents per ton for bituminous coal, allowed by the OPA where wage adjustments were granted to soft-coal miners. Electricity rates declined in Buffalo, New York, and the usual seasonal reduction in New York City gas rates was reflected in May bills. Rents were not surveyed in May.

In connection with the tables here given it should be borne in mind that the Bureau of Labor Statistics index indicates average changes in retail prices of selected goods, rents, and services, bought by families of wage earners and lower-salaried workers in large cities. The items covered represented 70 percent of the expenditures of families who had incomes ranging from \$1,250 to \$2,000 in 1934-36. The index does not show the full wartime effect on the cost of living of such factors as lowered quality, disappearance of low-priced goods and forced changes in housing and eating away from home. It does not measure changes in *total* "living costs"—that is, *in the total amount families spend for living*. Income taxes and bond subscriptions are not included.<sup>1</sup>

The indexes in the accompanying tables are based on time-to-time changes in the cost of goods and services purchased by wage earners and lower-salaried workers in large cities. They do not indicate whether it costs more to live in one city than in another. The data relate to the 15th of each month, except those for January 1941, in tables 1 and 2. For that month they were estimated for January 1 (the date used in the "Little Steel" wage formula of the National War Labor Board), by assuming an even rate of change from December 15, 1940, to the next pricing date. The President's "hold-the-line" order was issued April 8, 1943. The peak of the rise which led to that order was reached in May, which is, therefore, used for this comparison.

Food prices are collected monthly in 56 cities during the first four days of the week which includes the Tuesday nearest the 15th of the month. Aggregate costs of foods in each city, weighted to represent food purchases of families of wage earners and lower-salaried workers have been combined for the United States with the use of population weights. In March 1943, the number of cities included in the food index was increased from 51 to 56, and the number of foods from 54 to 61. Prices of clothing, housefurnishings, and miscellaneous goods and services are obtained in 34 large cities in March, June, September, and December. In intervening months, prices are collected in 21 of the 34 cities for a shorter list of goods and services. Rents are surveyed semiannually in most of the 34 cities (in March and September, or in June and December). In computing the all-items indexes for individual cities and the rent index for the average of large cities, because of the general stability of average rents at the present time, the indexes are held constant in cities not surveyed during the current quarter. Prices for fuel, electricity, and ice are collected monthly in 34 large cities.

<sup>1</sup> For a description of the methods used in computing the index, see Description of the Cost-of-Living Index of the Bureau of Labor Statistics. An appraisal of the factors enumerated above was given in the report of the President's Committee on the Cost of Living, November 17, 1944.

TABLE 1.—*Cost of Living in Large Cities as of May 15 and Earlier Dates*

Group	May 1945	Apr. 1945	May 1944	May 1943	May 1942	Jan. 1941	Aug. 1939
	This month	Last month	Last year	Hold-the-line order	Gen. Max. Price Reg.	"Little Steel" decision	Month before war in Europe
Indexes (1935-39=100)							
All items.....	128.0	127.1	125.1	125.1	116.0	100.8	98.6
Food.....	138.8	136.6	135.5	143.0	121.6	97.6	93.5
Clothing.....	144.4	144.0	137.4	127.9	126.2	101.2	100.3
Rent.....			108.1	108.0	109.9	105.0	104.3
Fuel, electricity, and ice.....	110.0	109.8	109.8	107.6	104.9	100.8	97.5
Gas and electricity.....	95.2	95.5	95.9	96.1	96.6	97.5	99.0
Other fuels and ice.....	124.4	123.7	123.3	118.7	112.9	104.0	96.3
Housefurnishings.....	144.9	144.7	135.0	125.1	122.2	100.2	100.6
Miscellaneous.....	123.8	123.7	121.3	115.3	110.9	101.8	100.4
Percent of change to May 1945							
All items.....		+0.7	+2.3	+2.3	+10.3	+27.0	+29.8
Food.....		+1.6	+2.4	-2.9	+14.1	+42.2	+48.4
Clothing.....		+3	+5.1	+12.9	+14.4	+42.7	+44.0
Rent <sup>1</sup> .....			+2	+3	-1.5	+3.1	+3.8
Fuel, electricity, and ice.....		+2	+2	+2.2	+4.9	+9.1	+12.8
Gas and electricity.....		-3	-7	-9	-1.4	-2.4	-3.8
Other fuels and ice.....		+6	+9	+4.8	+10.2	+19.6	+29.2
Housefurnishings.....		+1	+7.3	+15.8	+18.6	+44.6	+44.0
Miscellaneous.....		+1	+2.1	+7.4	+11.6	+21.6	+23.3

<sup>1</sup> Percent of change through Mar. 15, 1945.TABLE 2.—*Percent of Change, to May 1945, in Cost of Living, from Specified Dates, by Cities*

City	Apr. 1945	May 1944	May 1943	May 1942	Jan. 1941	Aug. 1939
	Last month	Last year	Hold-the-line order	Gen. Max. Price Reg.	"Little Steel" decision	Month before war in Europe
Average, all cities.....	+0.7	+2.3	+2.3	+10.3	+27.0	+29.8
Baltimore, Md.....	+7	+3.2	+2.1	+10.7	+30.0	+32.6
Birmingham, Ala.....	+2	+1.8	+4.1	+10.4	+28.9	+33.0
Boston, Mass.....	+8	+2.1	+1.3	+9.3	+25.0	+27.6
Buffalo, N. Y.....	+5	+1.3	-9	+6.0	+25.3	+29.6
Chicago, Ill.....	+1.1	+3.0	+2.7	+9.8	+26.4	+29.6
Cincinnati, Ohio.....	+8	+2.7	+3.4	+10.4	+28.5	+31.6
Cleveland, Ohio.....	+1.2	+2.1	+2.8	+10.8	+29.0	+31.6
Denver, Colo.....	+1.2	+2.3	+2.9	+10.7	+28.0	+29.8
Detroit, Mich.....	+9	+2.5	+1.8	+8.6	+27.7	+31.0
Houston, Tex.....	+5	+1.9	+1.4	+8.5	+23.6	+25.2
Kansas City, Mo.....	+5	+2.0	+2.0	+10.5	+28.2	+27.9
Los Angeles, Calif.....	+2	+2.0	+3.5	+10.2	+27.0	+29.6
Minneapolis, Minn.....	+6	+1.4	+1.7	+6.9	+21.7	+24.3
New York, N. Y.....	+9	+2.0	+3.4	+13.3	+27.1	+29.7
Philadelphia, Pa.....	+1.1	+2.9	+2.0	+11.0	+28.3	+30.2
Pittsburgh, Pa.....	+6	+2.8	+3.3	+11.4	+27.5	+31.1
St. Louis, Mo.....	+9	+1.9	+1.9	+9.3	+25.0	+28.7
San Francisco, Calif.....	-7	+1.8	+2.8	+12.0	+29.4	+32.6
Savannah, Ga.....	+4	+2.0	+3.0	+12.4	+34.0	+36.9
Seattle, Wash.....	+5	+2.5	+2.0	+9.0	+29.4	+31.7
Washington, D. C.....	+9	+2.8	+3.0	+11.1	+27.5	+29.2

TABLE 3.—Percent of Change in Cost of Living, April to May 1945, by Cities and Groups of Items

City	All items	Food	Clothing	Fuel, electric- ity, and ice	House- furnish- ings	Miscel- laneous
Average, all cities.....	+0.7	+1.6	+0.3	+0.2	+0.1	+0.1
Atlanta, Ga.....	.....	+0.7	.....	+0.6	.....	.....
Baltimore, Md.....	+0.7	+1.4	+0.5	+0.1	-0.1	-0.1
Birmingham, Ala.....	+0.2	+0.2	+0.1	+2.6	-0.1	0
Boston, Mass.....	+0.8	+1.7	+0.5	-0.2	+0.2	0
Buffalo, N. Y.....	+0.5	+1.8	0	-2.2	0	0
Chicago, Ill.....	+1.1	+2.4	+0.1	+0.7	+0.3	0
Cincinnati, Ohio.....	+0.8	+1.9	+0.1	+1.1	0	0
Cleveland, Ohio.....	+1.2	+2.8	-0.1	+1.0	+0.8	-0.1
Denver, Colo.....	+1.2	+2.8	0	+0.3	+0.1	0
Detroit, Mich.....	+0.9	+2.2	+0.5	+0.5	+0.4	0
Houston, Tex.....	+0.5	+1.2	0	0	-0.3	0
Indianapolis, Ind.....	.....	+1.4	.....	+1.0	.....	.....
Jacksonville, Fla.....	.....	+0.6	.....	+0.1	.....	.....
Kansas City, Mo.....	+0.5	+0.7	+0.8	+1.5	+0.1	0
Los Angeles, Calif.....	+0.2	+0.1	-0.1	0	-0.1	+0.6
Manchester, N. H.....	.....	+0.9	.....	-0.1	.....	.....
Memphis, Tenn.....	.....	+1.2	.....	+0.8	.....	.....
Milwaukee, Wis.....	.....	+2.8	.....	0	.....	.....
Minneapolis, Minn.....	+0.6	+1.3	+0.1	0	+0.1	0
Mobile, Ala.....	.....	0	.....	+0.8	.....	.....
New Orleans, La.....	.....	+0.3	.....	-0.1	.....	.....
New York, N. Y.....	+0.9	+2.0	+0.1	-0.2	0	0
Norfolk, Va.....	.....	+1.6	.....	+0.5	.....	.....
Philadelphia, Pa.....	+1.1	+2.6	+0.3	-0.2	-0.4	-0.2
Pittsburgh, Pa.....	+0.6	+1.3	+0.3	+0.6	+1.2	+0.1
Portland, Maine.....	.....	+1.6	.....	+0.2	.....	.....
Portland, Oreg.....	.....	+1.7	.....	+0.1	.....	.....
Richmond, Va.....	.....	+1.0	.....	+0.9	.....	.....
St. Louis, Mo.....	+0.9	+1.9	+0.1	+0.2	+0.1	0
San Francisco, Calif.....	-0.7	-1.8	+0.4	+0.2	+0.2	0
Savannah, Ga.....	+0.4	+0.6	+0.2	0	+1.5	+0.2
Scranton, Pa.....	.....	+2.5	.....	0	.....	.....
Seattle, Wash.....	+0.5	+1.0	+0.2	+1.0	+1.4	0
Washington, D. C.....	+0.9	+1.4	+2.2	+0.1	+0.1	0

TABLE 4.—Indexes of Cost of Living in Large Cities, 1935 to May 1945

Year and month	Indexes <sup>1</sup> (1935-39=100) of cost of—						
	All items	Food	Clothing	Rent	Fuel, electric- ity, and ice	House- furnish- ings	Miscel- laneous
1935.....	98.1	100.4	96.8	94.2	100.7	94.8	98.1
1936.....	99.1	101.3	97.6	96.4	100.2	96.3	98.7
1937.....	102.7	105.3	102.8	100.9	100.2	104.3	101.0
1938.....	100.8	97.8	102.2	104.1	99.9	103.3	101.5
1939.....	99.4	95.2	100.5	104.3	99.0	101.3	100.7
1940.....	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941.....	105.2	105.5	106.2	106.2	102.2	107.3	104.0
1942.....	116.5	123.9	124.2	108.5	105.4	122.2	110.9
1943.....	123.6	138.0	129.7	108.0	107.7	125.6	115.8
1944.....	125.5	136.1	138.8	108.2	109.8	136.4	121.3
Jan. 15.....	124.2	136.1	134.7	108.1	109.5	128.3	118.4
Feb. 15.....	123.8	134.5	135.2	108.1	110.3	128.7	118.7
Mar. 15.....	123.8	134.1	136.7	108.1	109.9	129.0	119.1
Apr. 15.....	124.6	134.6	137.1	108.1	109.9	132.9	120.9
May 15.....	125.1	135.5	137.4	108.1	109.8	135.0	121.3
June 15.....	125.4	135.7	138.0	108.1	109.6	138.4	121.7
July 15.....	126.1	137.4	138.3	108.2	109.7	138.7	122.0
Aug. 15.....	126.4	137.7	139.4	108.2	109.8	139.3	122.3
Sept. 15.....	126.5	137.0	141.4	108.2	109.8	140.7	122.4
Oct. 15.....	126.5	136.4	141.9	( <sup>2</sup> )	109.8	141.4	122.8
Nov. 15.....	126.6	136.5	142.1	( <sup>2</sup> )	109.9	141.7	122.9
Dec. 15.....	127.0	137.4	142.8	108.3	109.4	143.0	123.1
1945:							
Jan. 15.....	127.1	137.3	143.0	( <sup>2</sup> )	109.7	143.6	123.3
Feb. 15.....	126.9	136.5	143.3	( <sup>2</sup> )	110.0	144.0	123.4
Mar. 15.....	126.8	135.9	143.7	108.3	110.0	144.5	123.6
Apr. 15.....	127.1	136.6	144.0	( <sup>2</sup> )	109.8	144.7	123.7
May 15.....	128.0	138.8	144.4	( <sup>2</sup> )	110.0	144.9	123.8

<sup>1</sup> Based on changes in cost of goods purchased by wage earners and lower-salaried workers.<sup>2</sup> Rents not surveyed in this month.

## Supplies of Food in Independent Retail Stores, May 1945

FRESH meats were harder to buy in mid-May 1945 than in the previous month, according to independent grocers<sup>1</sup> reporting to the Bureau of Labor Statistics field representatives in 56 large cities. Margarine, shortening, lard, and cooking and salad oils were also less plentiful. Supplies of canned vegetables, most juices, and other staple foods, however, remained ample.

Meat counters were empty more often during the first 4 days of the week of May 15 than in the corresponding period in any month since March 1944. Approximately 85 percent of the stores had no veal, more than four-fifths were without pork loins and hams or bacon, and almost 7 out of every 10 had no beef or lamb. There were smaller supplies of all cuts of beef than in mid-April, the stores without the cheaper cuts increasing from 56 to 72 percent, and those without steaks and roasts from 55 to 69 percent. Lamb chops and roasts and all cuts of veal and pork were also somewhat more difficult to obtain. Frankfurters and bologna could be purchased in 69 percent of the stores, as compared to 93 percent in mid-April. In May 1944 almost 9 out of every 10 stores had beef, approximately three-fifths had all cuts and grades of veal and lamb, and pork and prepared meats were plentiful.

In May 1945 the Rocky Mountain and Pacific Coast regions had the largest stocks of meat, although veal was in short supply. The Pacific Coast, Midwest, and Southwest showed improvement in supplies. The Southeastern and New England regions continued to have the least meat. There was no beef, veal, lamb, or pork in more than 90 percent of the stores in the Southeastern area, while in New England lamb was the only fresh meat that could be bought in more than 10 percent of the stores.

Supplies of butter also were slightly smaller in mid-May than in mid-April; the greatest decrease occurred in the New York region where almost a fifth of the reporting stores had none in stock. The Southeastern region continued to have the smallest supply although the percent of grocers without stocks decreased from 34 to 21 percent. Margarine stocks were smaller in all regions. Shortening and lard could not be bought in more than a third of the stores, and cooking and salad oils in more than a tenth. In May 1944 all independent grocers had adequate supplies of butter, margarine, and shortening.

Canned corn and green and wax beans were found on most grocers' shelves, and canned peas were available in nearly 90 percent of the stores surveyed. There were adequate supplies of mixed vegetable and tomato juices. However, pineapple juice was still not obtainable in two-thirds of the stores, although supplies in New England and the western States showed substantial improvement over January when this commodity was last surveyed. Evaporated milk could be obtained in more than 90 percent of the stores.

<sup>1</sup> Chain stores not included.

*Independent Retail Stores Without Supplies of Specified Foods on April 17 and May 15, 1945, in 56 Large Cities*

Commodity	Percent of stores without supplies of specified foods <sup>1</sup>										
	Apr. 17, 1945	May 15, 1945									
		56 large cities	56 large cities	Region <sup>2</sup>							
				I	II	III	IV	V	VI	VII	VIII
Meats:											
Beef, steaks and roasts.....	55	69	3 90	69	62	3 90	63	77	35	40	
Beef, all other.....	56	72	90	72	71	3 90	62	80	30	44	
Veal, steaks, chops, and roasts.....	79	84	3 90	87	75	3 90	74	87	86	71	
Veal, all other.....	83	86	90	88	77	3 90	72	90	86	84	
Lamb, chops and roasts.....	57	68	85	70	77	3 90	63	77	27	6	
Lamb, all other.....	69	67	85	69	79	3 90	60	78	22	10	
Pork, loins, and hams.....	80	84	3 90	83	80	3 90	77	89	58	74	
Pork, bacon.....	78	82	3 90	89	36	3 90	79	64	78	71	
Frankfurters and bologna.....	7	31	40	37	26	31	33	34	2	4	
Fats and oils:											
Butter.....	6	9	7	18	2	21	2	40	40	40	
Margarine.....	17	26	19	37	6	5	2	34	47	31	
Shortening.....	30	36	25	51	30	6	13	47	19	21	
Lard.....	26	34	23	50	21	10	25	30	25	29	
Cooking and salad oils.....	8	12	8	17	12	5	3	7	9	13	
Processed foods:											
Corn, canned.....	3 1	2	1	6	40	2	40	40	40	40	
Peas, canned.....	3 7	11	9	23	3	14	40	40	40	40	
Beans, green and wax, canned.....	3 1	1	4	2	1	1	40	40	40	40	
Tomato catsup and chili sauce.....	7 1	1	40	1	2	40	1	40	40	40	
Mixed vegetable juices, canned.....	7 5	5	40	5	9	7	7	40	9	2	
Tomato juice, canned.....	7 1	2	40	3	1	2	1	40	40	5	
Grape juice.....	16	10	8	16	6	10	9	2	5	5	
Pineapple juice, canned.....	3 64	66	24	69	59	77	83	76	30	53	
Milk, evaporated, canned.....	2	6	1	14	40	5	40	1	9	40	

<sup>1</sup> Data are weighted by the number of independent food stores in each city, to derive regional and all-region percentages.

<sup>2</sup> Regions consist of the following cities: *Region I.*—Boston, Bridgeport, Fall River, Manchester, New Haven, Portland, Me., Providence. *Region II.*—Baltimore, Buffalo, Newark, New York, Philadelphia, Pittsburgh, Rochester, Scranton, Washington, D. C. *Region III.*—Cincinnati, Cleveland, Columbus, Detroit, Indianapolis, Louisville. *Region IV.*—Atlanta, Birmingham, Charleston, S. C., Jackson, Miss., Jacksonville, Knoxville, Memphis, Mobile, Norfolk, Richmond, Savannah, Winston-Salem. *Region V.*—Dallas, Houston, Kansas City, Mo., Little Rock, New Orleans, St. Louis, Wichita. *Region VI.*—Cedar Rapids, Chicago, Milwaukee, Minneapolis, Omaha, Peoria, St. Paul, Springfield, Ill. *Region VII.*—Butte, Denver, Salt Lake City. *Region VIII.*—Los Angeles, Portland, Oreg., San Francisco, Seattle.

<sup>3</sup> Over 90 percent out of stock.

<sup>4</sup> Same size, quality, or variety of the commodity was available in all stores surveyed.

<sup>5</sup> March 13, 1945 was last date surveyed.

<sup>6</sup> January 16, 1945 was last date surveyed.

<sup>7</sup> February 13, 1945 was last date surveyed.

## Retail Prices of Food in April 1945

PERCENTAGE changes in retail food costs on April 17, 1945, as compared with costs in the previous month and April 1944, are shown in table 1.

TABLE 1.—Percent of Change in Retail Costs of Food in 56 Large Cities Combined,<sup>1</sup> by Commodity Groups, in Specified Periods

Commodity group	Mar. 13, 1945, to Apr. 17, 1945	Apr. 18, 1944, to Apr. 17, 1945	May 18, 1943, to Apr. 17, 1945	Jan. 14, 1941, to Apr. 17, 1945	Aug. 15, 1939, to Apr. 17, 1945
All foods.....	+0.5	+1.5	-4.5	+39.7	+46.1
Cereals and bakery products.....	+2.2	+1.8	+1.2	+14.8	+16.6
Meats.....	0	+6	-5.4	+29.4	+36.7
Beef and veal.....	+2	-4	-9.6	+8.4	+19.1
Pork.....	0	+3	-10.4	+30.5	+27.7
Lamb.....	0	+1.2	-4.0	+37.7	+37.6
Chickens.....	+5	+2.6	+4.5	+58.7	+63.1
Fish, fresh and canned.....	-1.2	+7	+5.7	+78.5	+112.8
Dairy products.....	0	-1	-2.5	+27.0	+43.4
Eggs.....	-6	+9.6	-1.5	+43.6	+54.2
Fruits and vegetables.....	+2.2	+2.7	-9.2	+85.7	+87.6
Fresh.....	+2.6	+3.0	-10.9	+96.3	+97.5
Canned.....	+1	+4	-8	+42.2	+41.9
Dried.....	+3	+2.9	+6.3	+68.6	+85.9
Beverages.....	+1	+2	+1	+37.1	+31.3
Fats and oils.....	+1	+2	-2.0	+54.2	+46.5
Sugar and sweets.....	-1	-2	-9	+32.6	+32.2

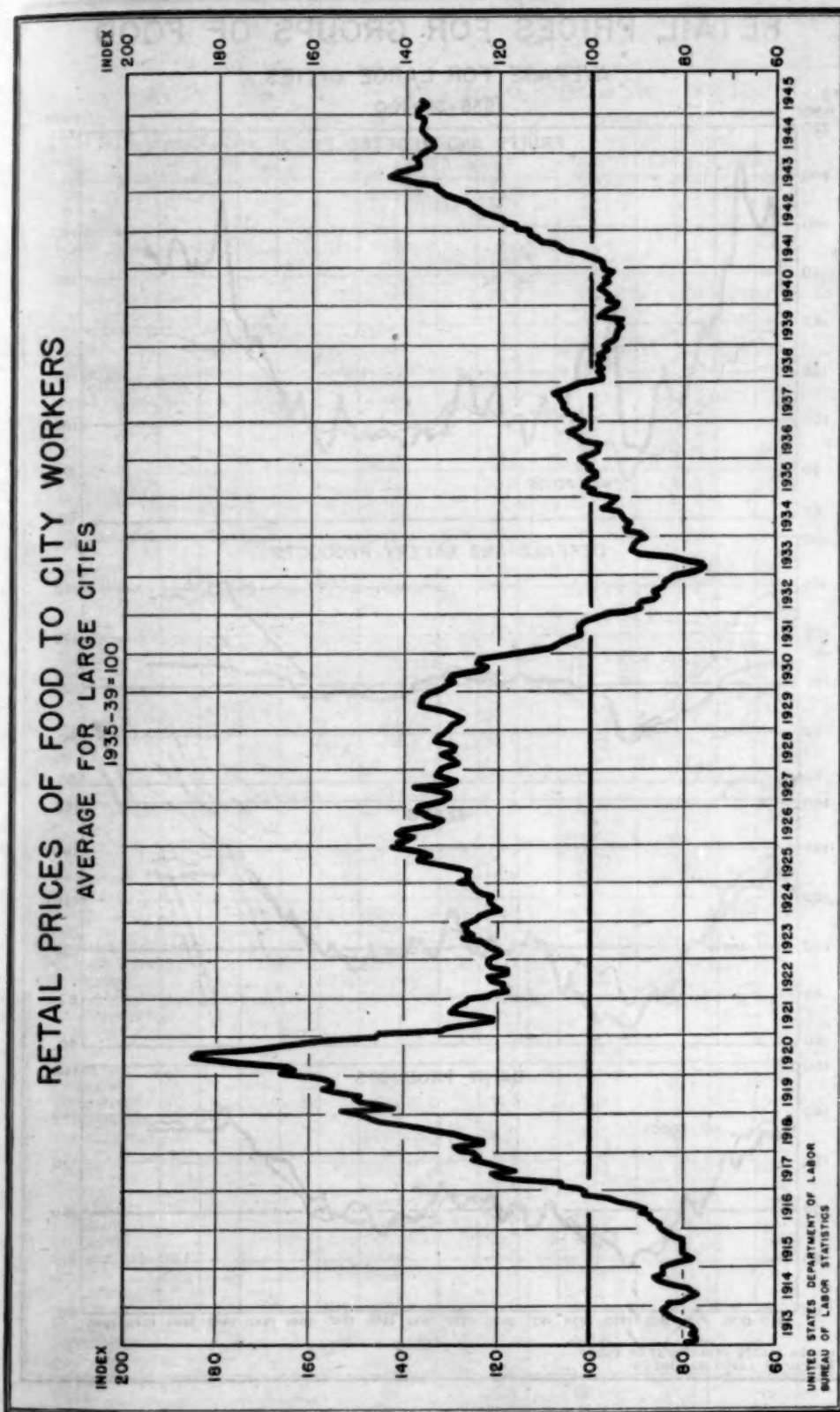
<sup>1</sup> The number of cities included in the index was changed from 51 to 56 in March 1943, with the necessary adjustments for maintaining comparability. At the same time the number of foods in the index was increased from 54 to 61.

TABLE 2.—Indexes of Retail Costs of Food in 56<sup>1</sup> Large Cities Combined,<sup>2</sup> by Commodity Groups, on Specified Dates  
[1935-39=100]

Commodity group	1945		1944	1943	1941	1939
	Apr. 17	Mar. 13	Apr. 18	May 18	Jan. 14	Aug. 15
All foods.....	136.6	135.9	134.6	143.0	97.8	93.5
Cereals and bakery products.....	108.9	108.7	108.0	107.6	94.9	93.4
Meats.....	130.8	130.8	130.0	138.3	101.1	95.7
Beef and veal.....	118.6	118.4	119.1	131.2	109.4	99.6
Pork.....	112.4	112.4	112.1	125.5	86.1	88.0
Lamb.....	135.9	135.9	134.3	141.6	98.7	98.8
Chickens.....	154.3	153.6	150.4	147.6	97.2	94.6
Fish, fresh and canned.....	211.9	214.4	210.4	200.5	118.7	99.6
Dairy products.....	133.5	133.5	133.6	136.9	105.1	93.1
Eggs.....	139.9	140.7	127.6	142.1	97.4	90.7
Fruits and vegetables.....	173.3	169.5	168.8	190.8	93.3	92.4
Fresh.....	183.3	178.6	178.0	205.8	93.4	92.8
Canned.....	130.0	129.9	129.5	131.1	91.4	91.6
Dried.....	167.9	167.4	163.2	158.0	99.6	90.3
Beverages.....	124.6	124.5	124.4	124.5	90.9	94.9
Fats and oils.....	123.8	123.7	123.5	126.3	80.3	84.5
Sugar and sweets.....	126.4	126.5	126.6	127.6	95.3	95.6

<sup>1</sup> Indexes based on 51 cities combined prior to March 1943.

<sup>2</sup> Aggregate costs of 61 foods (54 foods prior to March 1943) in each city, weighted to represent total purchases of families of wage earners and lower-salaried workers, have been combined with the use of population weights.



## RETAIL PRICES FOR GROUPS OF FOOD

AVERAGE FOR LARGE CITIES

1935-39=100

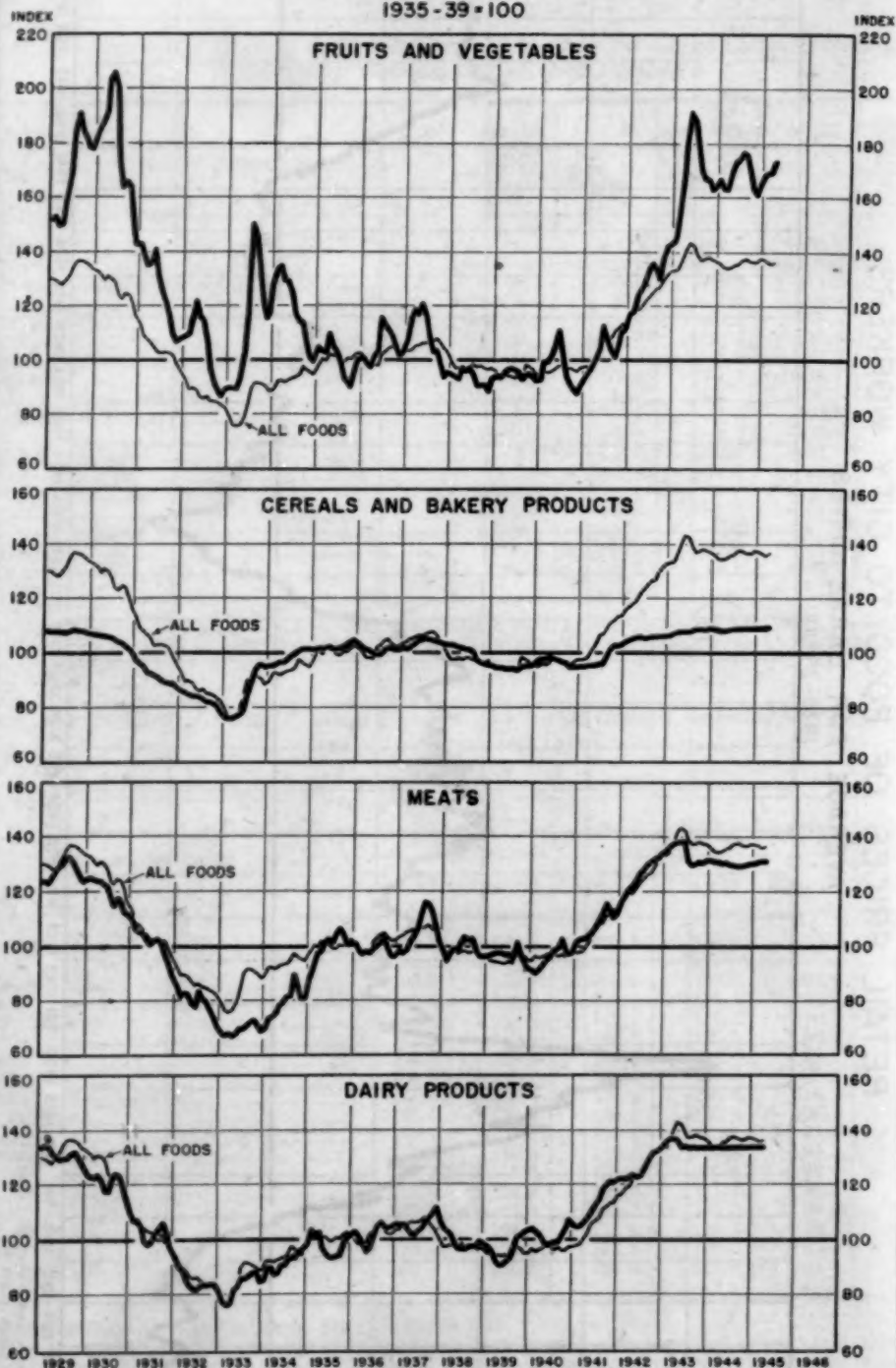
UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

TABLE 3.—Average Retail Prices of 78 Foods in 56 Large Cities Combined,<sup>1</sup> April 1945  
Compared With Earlier Months

Article	1945		1944	1941	1939
	Apr. 17	Mar. 13	Apr. 18	Jan. 14	Aug. 15
<b>Cereals and bakery products:</b>					
Cereals:	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Flour, wheat.....10 pounds.....	64.3	64.2	65.1	41.4	35.8
Macaroni.....pound.....	15.8	15.7	15.7	13.8	14.0
Wheat cereal <sup>2</sup> .....28 ounces.....	23.2	23.1	23.3	23.5	24.2
Corn flakes.....8 ounces.....	6.5	6.5	6.5	7.1	7.0
Corn meal.....pound.....	6.4	6.4	6.0	4.2	4.0
Rice <sup>2</sup> .....do.....	12.8	12.8	12.8	7.9	7.5
Rolled oats.....do.....	10.3	10.3	8.7	7.1	7.1
Flour, pancake <sup>2</sup> .....20 ounces.....	12.3	12.3	12.0	( <sup>3</sup> )	( <sup>3</sup> )
Bakery products:					
Bread, white.....pound.....	8.8	8.8	8.7	7.8	7.8
Bread, whole-wheat.....do.....	9.6	9.6	9.7	8.7	8.8
Bread, rye.....do.....	9.9	9.9	9.9	9.0	9.2
Vanilla cookies.....do.....	28.9	28.9	28.3	25.1	( <sup>4</sup> )
Soda crackers.....do.....	18.9	18.9	18.9	15.0	14.8
<b>Meats:</b>					
Beef:					
Round steak.....do.....	40.4	40.4	41.9	38.6	36.4
Rib roast.....do.....	32.7	32.7	33.8	31.5	28.9
Chuck roast.....do.....	28.0	27.9	29.2	25.2	22.5
Stew meat <sup>2</sup> .....do.....	29.3	29.3	31.6	( <sup>3</sup> )	( <sup>3</sup> )
Liver.....do.....	36.9	37.2	37.4	( <sup>4</sup> )	( <sup>4</sup> )
Hamburger.....do.....	27.4	27.5	28.4	( <sup>3</sup> )	( <sup>3</sup> )
Veal:					
Cutlets.....do.....	43.6	43.7	45.6	45.2	42.5
Roast, boned and rolled <sup>2</sup> .....do.....	34.6	34.9	35.7	( <sup>3</sup> )	( <sup>3</sup> )
Pork:					
Chops.....do.....	36.9	37.0	37.3	29.1	30.9
Bacon, sliced.....do.....	41.0	40.9	41.2	30.1	30.4
Ham, sliced.....do.....	49.3	50.0	51.3	45.1	46.4
Ham, whole.....do.....	34.5	34.9	35.6	26.2	27.4
Salt pork.....do.....	22.1	22.0	22.5	16.7	15.4
Liver <sup>2</sup> .....do.....	22.1	22.1	22.1	( <sup>3</sup> )	( <sup>3</sup> )
Sausage <sup>2</sup> .....do.....	38.1	38.5	38.4	( <sup>3</sup> )	( <sup>3</sup> )
Bologna, big <sup>2</sup> .....do.....	33.9	33.6	34.3	( <sup>3</sup> )	( <sup>3</sup> )
Lamb:					
Leg.....do.....	39.9	39.7	40.2	27.8	27.6
Rib chops.....do.....	45.4	45.3	45.3	35.0	36.7
Poultry: Roasting chickens.....do.....	46.5	46.2	45.0	31.1	30.9
Fish:					
Fish (fresh, frozen).....do.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Salmon, pink.....16-oz. can.....	23.4	23.6	24.1	15.7	12.8
Salmon, red <sup>2</sup> .....do.....	40.8	40.3	43.1	26.4	23.1
<b>Dairy products:</b>					
Butter.....pound.....	49.9	49.9	50.1	38.0	30.7
Cheese.....do.....	35.6	35.8	36.2	27.0	24.7
Milk, fresh (delivered).....quart.....	15.6	15.6	15.6	13.0	12.0
Milk, fresh (store).....do.....	14.5	14.5	14.5	11.9	11.0
Milk, evaporated.....14½-oz. can.....	10.1	10.0	10.0	7.1	6.7
Eggs: Eggs, fresh.....dozen.....	49.5	49.9	45.0	34.9	32.0
<b>Fruits and vegetables:</b>					
Fresh fruits:					
Apples.....pound.....	11.8	11.4	11.8	5.2	4.4
Bananas.....do.....	10.4	10.3	11.2	6.6	6.1
Oranges.....dozen.....	45.7	44.4	45.1	27.3	31.5
Grapefruit <sup>2</sup> .....each.....	9.4	9.0	7.9	( <sup>3</sup> )	( <sup>3</sup> )
Fresh vegetables:					
Beans, green.....pound.....	20.0	20.2	20.5	14.0	7.2
Cabbage.....do.....	6.6	5.5	5.6	3.4	3.9
Carrots.....bunch.....	8.0	7.8	7.2	6.0	4.6
Lettuce.....head.....	12.4	12.1	11.1	8.4	8.4
Onions.....pound.....	5.2	5.4	9.9	3.6	3.6
Potatoes.....15 pounds.....	79.7	77.4	63.2	29.2	34.4
Spinach.....pound.....	11.7	11.6	10.9	7.3	7.8
Sweetpotatoes.....do.....	9.5	9.4	11.3	5.0	5.5
Beets <sup>2</sup> .....bunch.....	9.6	9.4	8.8	( <sup>3</sup> )	( <sup>3</sup> )
Canned fruits:					
Peaches.....No. 2½ can.....	27.6	27.9	27.3	16.5	17.1
Pineapple.....do.....	26.9	26.8	27.5	20.9	21.0
Grapefruit juice.....No. 2 can.....	14.4	14.4	14.4	( <sup>3</sup> )	( <sup>3</sup> )
Canned vegetables:					
Beans, green.....do.....	13.0	13.1	13.2	10.0	10.0
Corn.....do.....	14.8	14.8	14.4	10.7	10.4
Peas.....do.....	13.3	13.3	13.3	13.2	13.6
Tomatoes.....do.....	12.2	12.1	12.0	8.4	8.6
Soup, vegetable <sup>2</sup> .....11-oz. can.....	13.4	13.4	13.4	( <sup>3</sup> )	( <sup>3</sup> )

See footnotes at end of table.

TABLE 3.—Average Retail Prices of 78 Foods in 56 Large Cities Combined,<sup>1</sup> April 1945 Compared With Earlier Months—Continued

Article	1945		1944	1941	1939
	Apr. 17	Mar. 13	Apr. 18	Jan. 14	Aug. 15
<b>Fruits and vegetables—Continued.</b>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Dried fruits: Prunes.....pound..	17.7	17.5	16.8	9.6	8.8
Dried vegetables:					
Navy beans.....do.....	11.4	11.3	10.6	6.5	5.8
Soup, dehydrated, chicken noodle <sup>2</sup> .....ounce..	3.8	3.7	3.7	( <sup>3</sup> )	( <sup>3</sup> )
<b>Beverages:</b>					
Coffee.....pound.....	30.4	30.3	29.9	20.7	22.3
Tea..... <sup>4</sup> / <sub>4</sub> pound.....	24.1	24.1	23.8	17.6	17.2
Cocoa <sup>5</sup> ..... <sup>1</sup> / <sub>4</sub> pound.....	10.4	10.4	10.0	9.1	8.6
<b>Fats and oils:</b>					
Lard.....pound.....	18.8	18.8	18.8	9.3	9.9
Shortening other than lard—					
In cartons.....do.....	20.2	20.0	20.1	11.3	11.7
In other containers.....do.....	24.6	24.6	24.7	18.3	20.2
Salad dressing.....pint.....	25.5	25.6	25.6	20.1	( <sup>6</sup> )
Oleomargarine.....pound.....	24.2	24.1	24.1	15.6	16.5
Peanut butter.....do.....	28.4	28.3	28.4	17.9	17.9
Oil, cooking or salad <sup>2</sup> .....pint.....	30.8	30.7	30.6	( <sup>6</sup> )	( <sup>6</sup> )
<b>Sugar and sweets:</b>					
Sugar.....pound.....	6.7	6.7	6.8	5.1	5.2
Corn sirup.....24 ounces.....	15.8	15.8	15.8	13.6	13.7
Molasses <sup>1</sup> .....18 ounces.....	15.7	15.7	15.9	13.4	13.6
Apple butter <sup>2</sup> .....16 ounces.....	13.8	13.6	13.2	( <sup>6</sup> )	( <sup>6</sup> )

<sup>1</sup> Data are based on 51 cities combined prior to January 1943.<sup>2</sup> Not included in index.<sup>3</sup> First priced, February 1943.<sup>4</sup> Not priced.<sup>5</sup> Composite price not computed.<sup>6</sup> First priced, October 1941.TABLE 4.—Indexes of Average Retail Costs of All Foods, by Cities,<sup>1</sup> on Specified Dates  
[1935-39=100]

City	1945		1944	1941	1939
	Apr. 17	Mar. 13	Apr. 18	Jan. 14	Aug. 15
United States.....	136.6	135.9	134.6	97.8	93.5
<b>New England:</b>					
Boston.....	130.8	130.6	129.5	95.2	93.5
Bridgeport.....	133.9	132.8	131.4	96.5	93.2
Fall River.....	130.1	130.6	130.0	97.5	95.4
Manchester.....	132.7	132.7	130.8	96.6	94.9
New Haven.....	134.1	133.5	132.4	95.7	93.7
Portland, Maine.....	131.3	131.4	131.2	95.3	95.9
Providence.....	134.1	134.8	132.1	96.3	93.7
<b>Middle Atlantic:</b>					
Buffalo.....	134.7	135.2	132.5	100.2	94.5
Newark.....	138.0	137.5	137.6	98.8	95.6
New York.....	136.8	136.4	135.7	99.5	95.8
Philadelphia.....	134.2	134.3	132.5	95.0	93.0
Pittsburgh.....	135.4	133.8	134.8	98.0	92.5
Rochester.....	133.7	132.6	128.5	99.9	92.3
Scranton.....	136.4	135.9	135.4	97.5	92.1
<b>East North Central:</b>					
Chicago.....	136.2	135.0	133.9	98.2	92.3
Cincinnati.....	135.0	134.1	135.4	96.5	90.4
Cleveland.....	140.7	139.6	141.7	99.2	93.6
Columbus, Ohio.....	128.4	128.1	127.6	93.4	88.1
Detroit.....	132.1	131.4	131.2	97.0	90.6
Indianapolis.....	133.3	132.1	132.1	98.2	90.7
Milwaukee.....	134.3	133.8	132.1	96.9	91.1
Peoria.....	140.9	139.7	137.5	99.0	93.4
Springfield, Ill.....	142.0	140.8	140.2	96.2	94.1
<b>West North Central:</b>					
Cedar Rapids <sup>2</sup> .....	140.5	139.0	136.2	95.9	-----
Kansas City.....	131.5	130.3	130.1	92.4	91.5
Minneapolis.....	129.5	129.3	128.9	99.0	95.0
Omaha.....	130.3	129.6	131.0	97.9	92.3
St. Louis.....	139.0	138.1	137.4	99.2	93.8
St. Paul.....	128.5	128.2	127.3	98.6	94.3
Wichita <sup>3</sup> .....	149.9	147.6	144.2	97.2	-----

See footnotes at end of table.

TABLE 4.—Indexes of Average Retail Costs of All Foods, by Cities, on Specified Dates—Continued

City	1945		1944	1941	1939
	Apr. 17	Mar. 13	Apr. 18	Jan. 14	Aug. 15
<b>South Atlantic:</b>					
Atlanta	137.3	136.9	134.6	94.3	92.5
Baltimore	144.9	144.1	140.3	97.9	94.7
Charleston, S. C.	133.5	134.0	132.1	95.9	95.1
Jacksonville	145.5	142.8	141.4	98.8	95.8
Norfolk <sup>1</sup>	140.1	141.4	143.8	95.8	93.6
Richmond	133.2	133.5	131.6	93.7	92.2
Savannah	150.8	150.7	150.8	100.5	96.7
Washington, D. C.	137.8	136.8	132.8	97.7	94.1
Winston-Salem <sup>2</sup>	138.0	137.1	132.9	93.7	-----
<b>East South Central:</b>					
Birmingham	141.1	139.8	136.1	96.0	90.7
Jackson <sup>3</sup>	148.3	147.1	141.2	105.3	-----
Knoxville <sup>3</sup>	156.5	156.3	151.8	97.1	-----
Louisville	130.6	130.2	131.8	95.5	92.1
Memphis	145.2	144.4	141.3	94.2	89.7
Mobile	144.9	143.9	143.4	97.9	95.5
<b>West South Central:</b>					
Dallas	134.4	133.8	131.6	92.6	91.7
Houston	136.7	134.8	135.3	102.6	97.8
Little Rock	137.6	136.1	132.9	95.6	94.0
New Orleans	152.5	151.0	148.5	101.	97.6
<b>Mountain:</b>					
Butte	134.2	133.2	133.2	98.7	94.1
Denver	137.9	136.9	136.6	94.8	92.7
Salt Lake City	140.1	139.0	138.6	97.5	94.6
<b>Pacific:</b>					
Los Angeles	144.4	142.7	138.6	101.8	94.6
Portland, Oreg.	147.4	145.8	142.2	101.7	96.1
San Francisco	148.4	146.2	142.2	99.6	93.8
Seattle	143.0	143.0	139.2	101.0	94.5

<sup>1</sup> Aggregate costs of 61 foods in each city (54 foods prior to March 1943), weighted to represent total purchases of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights. Primary use is for time-to-time comparisons rather than place-to-place comparisons.

<sup>2</sup> June 1940=100.

<sup>3</sup> Includes Portsmouth and Newport News.

TABLE 5.—Indexes of Retail Food Costs in 56 Large Cities Combined,<sup>1</sup> 1913 to April 1944

[1935-39=100]

Year	All-foods index	Year	All-foods index	Year and month	All-foods index
1913	79.9	1929	132.5	1944	
1914	81.8	1930	126.0	January	136.1
1915	80.9	1931	103.9	February	134.5
1916	90.8	1932	86.5	March	134.1
1917	116.9	1933	84.1	April	134.6
1918	134.4	1934	93.7	May	135.5
1919	149.8	1935	100.4	June	135.7
1920	168.8	1936	101.3	July	137.4
				August	137.7
1921	128.3	1937	105.3	September	137.0
1922	119.9	1938	97.8	October	136.4
1923	124.0	1939	95.2	November	136.5
1924	122.8	1940	96.6	December	137.4
1925	132.9	1941	105.5		
1926	137.4	1942	123.9	1945	
1927	132.3	1943	138.0	January	137.3
1928	130.8	1944	136.1	February	136.5
				March	135.9
				April	136.6

<sup>1</sup> Indexes based on 51 cities combined prior to March 1943.

## Cost of Living and Wages of Petroleum Workers in Venezuela, 1944<sup>1</sup>

WAGE increases of 2 bolivares<sup>2</sup> per day for salaried employees earning up to 600 bolivares per month and for laborers earning up to 25 bolivares per day were granted by Executive resolution of November 10, 1944, to persons employed in permanent petroleum camps and petroleum ports in Venezuela. The action was taken in order to meet rising costs of living in accord with similar action earlier in 1944 by which increases were granted to Federal government employees, bus drivers, cement workers, and soap and tire manufacturing workers.

Of the three wage-classification groups in Venezuela, the lowest-paid group consists of the agricultural laborers who make up by far the greatest part of the working population and receive less than 5 bolivares per day. The second wage group includes the unskilled and semiskilled workers in industry who receive from 5 to 10 bolivares per day. The third group consists of the relatively small number of skilled workers in the country—persons making over 10 bolivares per day. Workers employed in the petroleum industry belong in the highest of the three groups. In the first quarter of 1945 only one class of worker in the Caracas area earned 25 bolivares daily, the upper pay limit to which increases were granted for petroleum workers in the recent resolution.

### *Wages in the Petroleum Industry*

The average salary in the petroleum industry in Venezuela was reported in 1940 to be 600 bolivares per month and the average daily wage to be 11 bolivares, as compared with averages for all workers of 230 bolivares and 7 bolivares in the Federal District, the district of highest average wage rates. Data published in 1940 showed that in industry and commerce as a whole some 100,000 employed persons accounted for a pay roll of 130,000,000 bolivares, whereas in the petroleum industry alone about 25,000 persons received a pay roll of 90,000,000 bolivares. The ranges of monthly earnings of various salaried employees and wage earners in the petroleum industry in 1940 were recorded by the Ministry of Labor and Communications as follows:

	Bolivares		Bolivares
Engineers.....	360-1, 000	Electricians.....	300-480
Laboratory workers.....	360-1, 000	Tank men.....	270-480
Mechanics.....	192- 880	Welders.....	192-336
Chemists.....	400- 750	Riveters.....	180-270
Drillers.....	750- ---	Laborers.....	162-450

<sup>1</sup> Data are from reports of Carl Breuer, second secretary of United States Embassy and labor attaché Caracas, February 8, 1944, and January 15, 1945, of Frank P. Corrigan, Caracas, October 28, 1944, and of Guy A. Morin, clerk, United States Consulate, Maracaibo November 16, 1944; Proceedings of the Eighth American Scientific Congress, May 10-18, 1940, Vol. XI (Washington, 1943); Memoria, Ministerio del Trabajo y de Comunicaciones, 1940 (Caracas, 1941); Gaceta Oficial (Venezuela), November 10, 1944.

<sup>2</sup> Average exchange rate of bolivar (controlled) in 1940=31.35 cents; in 1944=29.85 cents.

Records available for 1942 indicate no change in rates of pay. During 1943 and 1944, however, the industry enjoyed boom conditions and provided in the former year 83.9 percent (\$72,450,554) of the foreign exchange purchases of the Central Bank of Venezuela. A Congress of Petroleum Workers was held in 1943, and some increases in pay were given in that year.

By the autumn of 1944, salaried employees in the petroleum industry at Maracaibo were receiving monthly from 300 bolivares (for messengers) to 3,000 bolivares (for administrative chiefs). Some of these employees lived in the company camps and received housing and hospitalization privileges, but the majority were stenographers, accountants, and messengers living outside the camps on income inadequate to cope with the rising costs of living. In the spring of 1944 the larger petroleum companies began selling corn flour, cheese, black beans, powdered milk, potatoes, rice, lard, macaroni, oats, and flour in company commissaries, at prices which had prevailed in March 1940.

The amelioration achieved by these measures was insufficient to prevent strikes, and the Labor and Communications Ministry consequently issued the Executive resolution of November 10, granting the increases in remuneration mentioned above. The increases are to be effective for 1 year from November 15, 1944, during which time points raised in the petitions of the workers may not be made the subject of further complaints.

### *Cost of Living of Petroleum Workers*

Indexes of the cost of living of wage earners in the petroleum industry in Venezuela, compiled by the statistician for the three large petroleum companies, for July, August, and September of 1944, are shown below, by regions (Caracas and Maracaibo).

*Indexes of Cost of Living of Wage Earners in Petroleum Industry of Venezuela, July to September 1944, by Group of Items and Place of Residence*

Area and month	Indexes (March 1940=100) of cost of—						
	All items	Food	Clothing	Sundries	Housing	Light	Fuel
<b>Caracas and Maracaibo areas:</b>							
<b>In company houses:</b>							
July.....	111.6	110.3	127.8	111.0	100.0	100.0	97.1
August.....	111.2	110.0	127.8	111.0	100.0	100.0	97.1
September.....	109.5	106.9	127.8	111.0	100.0	100.0	97.1
<b>Not in company houses:</b>							
July.....	109.3	117.5	131.2	110.8	82.9	104.8	63.8
August.....	109.3	117.2	131.2	110.8	82.9	104.8	63.8
September.....	105.9	110.0	131.2	110.8	82.9	104.8	63.8
<b>Caracas:</b>							
July.....	121.4	141.5	124.4	107.9	90.0	100.0	75.0
August.....	125.3	149.5	124.4	107.9	90.0	100.0	75.0
September.....	113.4	126.1	124.4	107.9	90.0	100.0	75.0
<b>Maracaibo:</b>							
July.....	115.2	135.8	149.4	110.7	58.6	86.7	60.0
August.....	113.3	132.1	149.4	110.7	58.6	86.7	60.0
September.....	108.8	123.0	149.4	110.7	58.6	86.7	60.0

## Wholesale Prices

### Wholesale Prices in May 1945

CONTINUED price advances for agricultural commodities and higher ceiling prices as results of adjusted ceilings for iron and steel products, bituminous coal, and lumber raised the Bureau of Labor Statistics index of commodity prices at the primary market <sup>1</sup> level 0.3 percent during May, to 106.0 percent of the 1926 average. In the past 12 months the all-commodities index rose 1.9 percent to a level more than 41 percent above that of August 1939, and by May 1945 had reached the highest point since the beginning of the war.

Average prices for farm products increased 0.7 percent during the month, while foods advanced 1.1 percent, fuel and lighting materials and building materials rose 0.2 percent, and metals and metal products 0.1 percent. Indexes for hides and leather products, textile products, chemicals and allied products, housefurnishing goods, and miscellaneous commodities remained unchanged at the level for April.

Average prices for raw materials advanced 0.8 percent, reflecting the higher prices for agricultural commodities. Indexes for semi-manufactured articles and finished products were unchanged during the month.

Higher prices for fresh fruits and vegetables resulting from short supplies and some seasonal price rises accounted for the major part of the 0.7 percent increase in average prices for farm products. Prices for apples advanced over 18 percent; for onions, nearly 29 percent; and for sweetpotatoes, nearly 24 percent. White potatoes were substantially higher in most markets. Quotations for cotton continued to advance and fractional increases were reported for oranges and tobacco. Substantial declines occurred in hay prices, and fresh milk at Chicago and lemons were lower. In the grain markets, oats decreased over 11 percent, and barley and wheat quotations were fractionally lower. Corn and rye prices increased. Quotations for sheep dropped 6 percent; for cows, nearly 3 percent; and for calves, over 3 percent. Prices for live poultry and for steers were higher.

The rise of 1.1 percent in average prices of foods in primary markets was caused largely by the substantial increases for fresh fruits and vegetables. In addition, prices for dressed poultry increased nearly 3 percent, and rye flour and oatmeal were higher. Prices for wheat flour declined.

Higher prices for percale yard goods balanced lower prices for bleached muslin and print cloth and the textile products group index remained unchanged at the level of the previous month.

Higher ceiling prices for bituminous coal to cover wage adjustments raised average prices over 2 percent. This advance, together with fractional increases for anthracite, more than offset lower sales realiza-

<sup>1</sup> The Bureau of Labor Statistics wholesale price data for the most part represent prices prevailing in the "first commercial transaction." They are prices quoted in primary markets, at principal distribution points.

tions for gas and electricity and lower quotations for Oklahoma natural gasoline and raised the fuel and lighting materials group index by 0.2 percent.

Price increases following adjustments in OPA ceiling prices for a wide range of carbon steel products and steel mill manufactures increased the metals and metal products index by 0.1 percent. For a number of these products this was the first price increase since the introduction of price control in 1941. Larger supplies of Spanish mercury reached the United States markets and lowered mercury prices more than 1 percent.

Higher prices for Douglas fir boards and dimension, approved by OPA to stimulate production, were chiefly responsible for an advance of 0.2 percent in average prices for building materials. Douglas fir boards increased over 10 percent. Lower ceiling prices for Douglas fir timbers reduced the price of this commodity. Slightly higher prices were reported for ponderosa pine and sugar pine and turpentine. Common brick, sand, gravel, and lime were fractionally higher. Prices for Idaho pine lumber and butyl acetate declined slightly.

A decrease of over 8 percent in prices for ergot was not sufficient to affect the group index for chemicals and allied products which remained unchanged at the level for April.

The housefurnishing-goods group index was unchanged, although slightly higher prices were reported for cotton blankets.

Automobile tires and tubes, cattle feed, paper and pulp, and crude rubber were unchanged in price during May.

Major price changes during the 12-month period have been in prices for agricultural commodities, but significant price changes also have occurred for a number of industrial commodities. Since May 1944 average prices of farm products have risen nearly 6 percent, largely as the result of higher prices for livestock and poultry and higher quotations for fresh fruits and vegetables. Average food prices rose nearly 2 percent. Grains, on the other hand, were slightly lower than at this time last year. Average prices for hides and skins advanced nearly 5 percent because of higher prices for shearlings. Brick and tile prices increased 10 percent, and cement, 3 percent, to cover higher production costs resulting from low volume production. Cotton goods were over 5 percent higher on the average than in May 1944, as the result of higher prices under the Bankhead Amendment to the Stabilization Extension Act of 1944. Drugs and pharmaceuticals were nearly 5 percent lower. In the past 12 months, average prices of raw materials advanced over 4 percent; of semimanufactured articles, 1.4 percent; and of finished products, nearly 1 percent.

During the more than 5½ years since the outbreak of war in Europe, average prices of commodities in primary markets have advanced over 41 percent. Market prices have more than doubled for grains, livestock and poultry, fruits and vegetables, oils and fats, and cattle feed. In addition, increases of more than 50 percent have occurred for dairy products, hides and skins, cotton goods, and lumber. Since August 1939, average primary market prices for raw materials have risen 77 percent, compared to increases of approximately 28 percent for semimanufactured and finished goods.

Percentage comparisons of the May 1945 level of wholesale prices with April 1945, May 1944, and August 1939, with corresponding index numbers, are given in table 1.

TABLE 1.—*Indexes of Wholesale Prices by Groups and Subgroups of Commodities, May 1945, Compared With April 1945, May 1944, and August 1939*

[1926=100]

Group and subgroup	May 1945	Apr. 1945	Percent of change	May 1944	Percent of change	Aug. 1939	Percent of change
All commodities	106.0	105.7	+ .3	104.0	+1.9	75.0	+41.3
Farm products	129.9	129.0	+0.7	122.9	+5.7	61.0	+113.0
Grains	129.1	130.5	-1.1	129.7	- .5	51.5	+150.7
Livestock and poultry	135.5	136.4	- .7	122.6	+10.5	66.0	+105.3
Other farm products	125.9	123.2	+2.2	120.4	+4.6	60.1	+109.5
Foods	107.0	105.8	+1.1	105.0	+1.9	67.2	+59.2
Dairy products	110.6	110.7	- .1	110.3	+ .3	67.9	+62.9
Cereal products	95.4	95.4	0	95.0	+ .4	71.9	+32.7
Fruits and vegetables	131.4	123.4	+6.5	126.8	+3.6	58.5	+124.6
Meats	108.6	108.2	+ .4	106.6	+1.9	73.7	+47.4
Other foods	94.7	94.7	0	91.9	+3.0	60.3	+57.0
Hides and leather products	117.9	117.9	0	117.0	+ .8	92.7	+27.2
Shoes	126.3	126.3	0	126.3	0	100.8	+25.3
Hides and skins	117.0	117.0	0	111.9	+4.6	77.2	+51.6
Leather	101.3	101.3	0	101.3	0	84.0	+20.6
Other leather products	115.2	115.2	0	115.2	0	97.1	+18.6
Textile products	99.6	99.6	0	97.8	+1.8	67.8	+46.9
Clothing	107.4	107.4	0	107.0	+ .4	81.5	+31.8
Cotton goods	119.7	119.7	0	113.9	+5.1	65.5	+82.7
Hosiery and underwear	71.5	71.5	0	70.5	+1.4	61.5	+16.3
Rayon	30.2	30.2	0	30.3	- .3	28.5	+6.0
Silk	(1)	(1)		(1)		44.3	
Woolen and worsted goods	112.7	112.7	0	112.5	+ .2	75.5	+49.3
Other textile products	100.9	100.9	0	100.5	+ .4	63.7	+58.4
Fuel and lighting materials	83.7	83.5	+ .2	83.2	+ .6	72.6	+15.3
Anthracite	95.6	95.3	+ .3	96.4	- .8	72.1	+32.6
Bituminous coal	123.2	120.6	+2.2	120.4	+2.3	96.0	+28.3
Coke	130.7	130.7	0	130.7	0	104.2	+25.4
Electricity	(1)	(1)		59.0		75.8	
Gas	(1)	77.0		78.4		86.7	
Petroleum and products	64.2	64.2	0	64.0	+ .3	51.7	+24.2
Metals and metal products	104.3	104.2	+ .1	103.7	+ .6	93.2	+11.9
Agricultural implements	97.5	97.5	0	97.2	+ .3	93.5	+4.3
Farm machinery	98.7	98.7	0	98.4	+ .3	94.7	+4.2
Iron and steel	98.4	98.1	+ .3	97.1	+1.3	95.1	+3.5
Motor vehicles	112.8	112.8	0	112.8	0	92.5	+21.9
Nonferrous metals	85.9	85.9	0	85.8	+ .1	74.6	+15.1
Plumbing and heating	92.4	92.4	0	92.4	0	79.3	+16.5
Building materials	117.3	117.1	+ .2	115.7	+1.4	89.6	+30.9
Brick and tile	110.7	110.6	+ .1	100.5	+10.1	90.5	+22.3
Cement	99.4	99.4	0	96.4	+3.1	91.3	+8.9
Lumber	154.4	153.9	+ .5	154.0	+ .4	90.1	+71.4
Paint and paint materials	106.4	106.3	+ .1	104.7	+1.6	82.1	+29.6
Plumbing and heating	92.4	92.4	0	92.4	0	79.3	+16.5
Structural steel	107.3	107.3	0	107.3	0	107.3	0
Other building materials	104.1	103.8	+ .3	103.0	+1.1	89.5	+16.3
Chemicals and allied products	94.9	94.9	0	95.5	- .6	74.2	+27.9
Chemicals	95.8	95.8	0	96.3	- .5	83.8	+14.3
Drugs and pharmaceuticals	106.8	106.8	0	112.0	-4.6	77.1	+38.5
Fertilizer materials	81.9	81.9	0	81.4	+ .5	65.5	+25.0
Mixed fertilizers	86.6	86.6	0	86.3	+ .3	73.1	+18.5
Oils and fats	102.0	102.0	0	102.0	0	42.6	+151.2
Housefurnishing goods	104.5	104.5	0	104.3	+ .2	85.6	+22.1
Furnishings	107.5	107.5	0	107.2	+ .3	90.0	+19.4
Furniture	101.5	101.5	0	101.4	+ .1	81.1	+25.2
Miscellaneous	94.8	94.8	0	93.5	+1.4	73.3	+29.3
Automobile tires and tubes	73.0	73.0	0	73.0	0	60.5	+20.7
Cattle feed	159.6	159.6	0	159.6	0	68.4	+133.3
Paper and pulp	109.0	109.0	0	107.2	+1.7	80.0	+36.2
Rubber, crude	46.2	46.2	0	46.2	0	34.9	+32.4
Other miscellaneous	98.9	98.9	0	96.8	+2.2	81.3	+21.6
Raw materials	117.7	116.8	+ .8	113.0	+4.2	66.5	+77.0
Semimanufactured articles	95.0	95.0	0	93.7	+1.4	74.5	+27.5
Manufactured products	101.8	101.8	0	100.9	+ .9	79.1	+28.7
All commodities other than farm products	100.6	100.5	+ .1	99.7	+ .9	77.9	+29.1
All commodities other than farm products and foods	99.4	99.3	+ .1	98.5	+ .9	80.1	+24.1

¹ Data not available.

### Index Numbers by Commodity Groups, 1926 to May 1945

Index numbers of wholesale prices, by commodity groups, for selected years from 1926 to 1944 and by months from May 1944 to May 1945, are shown in table 2.

TABLE 2.—Index Numbers of Wholesale Prices by Groups of Commodities  
[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929.....	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932.....	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933.....	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1936.....	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	80.8
1937.....	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938.....	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	78.6
1939.....	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	77.1
1940.....	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
1941.....	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.4	94.3	82.0	87.3
1942.....	105.9	99.6	117.7	96.9	78.5	103.8	110.2	95.5	102.4	89.7	98.8
1943.....	122.6	106.6	117.5	97.4	80.8	103.8	111.4	94.9	102.7	92.2	103.1
1944.....	123.3	104.9	116.7	98.4	83.0	103.8	115.5	95.2	104.3	93.6	104.0
1944											
May.....	122.9	105.0	117.0	97.8	83.2	103.7	115.7	95.5	104.3	93.5	104.0
June.....	125.0	106.5	116.4	97.8	83.3	103.7	115.9	95.3	104.3	93.5	104.3
July.....	124.1	105.8	116.2	98.0	83.2	103.7	115.9	95.5	104.3	93.6	104.1
August.....	122.6	104.8	116.0	98.4	83.2	103.8	116.0	95.5	104.4	93.6	103.9
September.....	122.7	104.2	116.0	99.2	83.0	103.8	116.0	94.9	104.4	93.6	104.0
October.....	123.4	104.2	116.2	99.4	82.9	103.7	116.3	95.0	104.4	93.6	104.1
November.....	124.4	105.1	116.2	99.4	83.1	103.7	116.4	94.8	104.4	94.0	104.4
December.....	125.5	105.5	117.4	99.5	83.1	103.8	116.4	94.8	104.4	94.2	104.7
1945											
January.....	126.2	104.7	117.5	99.6	83.3	104.0	116.8	94.9	104.5	94.2	104.9
February.....	127.0	104.7	117.6	99.7	83.3	104.2	117.0	94.9	104.5	94.6	105.2
March.....	127.2	104.6	117.8	99.7	83.4	104.2	117.1	94.9	104.5	94.6	105.3
April.....	129.0	105.8	117.9	99.6	83.5	104.2	117.1	94.9	104.5	94.8	105.7
May.....	129.9	107.0	117.9	99.6	83.7	104.3	117.3	94.9	104.5	94.8	106.0

The price trend for specified years and months since 1926 is shown in table 3 for the following groups of commodities: Raw materials, semimanufactured articles, manufactured products, commodities other than farm products, and commodities other than farm products and foods. The list of commodities included under the classifications "Raw materials," "Semimanufactured articles," and "Manufactured products" was shown on pages 10 and 11 of Wholesale Prices, July to December and Year 1943 (Bulletin No. 785).

TABLE 3.—Index Numbers of Wholesale Prices by Special Groups of Commodities

[1926=100]

Year	Raw materials	Semi-manufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods	Year and month	Raw materials	Semi-manufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1926.....	100.0	100.0	100.0	100.0	100.0	1944					
1929.....	97.5	93.9	94.5	93.3	91.6	May.....	113.0	93.7	100.9	99.7	98.5
1932.....	55.1	59.3	70.3	68.3	70.2	June.....	114.2	93.8	100.9	99.6	98.5
1933.....	56.5	65.4	70.5	69.0	71.2	July.....	113.6	93.9	100.9	99.6	98.5
1936.....	79.9	75.9	82.0	80.7	79.6	August.....	112.7	94.1	100.9	99.7	98.6
1937.....	84.8	85.3	87.2	86.2	85.3	September.....	112.8	94.7	100.9	99.7	98.6
						October.....	113.2	94.8	101.0	99.8	98.7
1938.....	72.0	75.4	82.2	80.6	81.7	November.....	113.8	94.8	101.1	99.9	98.8
1939.....	70.2	77.0	80.4	79.5	81.3	December.....	114.6	94.8	101.1	100.0	98.9
1940.....	71.9	79.1	81.6	80.8	83.0						
1941.....	83.5	86.9	89.1	88.3	89.0	1945					
1942.....	100.6	92.6	98.6	97.0	95.5	January.....	115.1	94.9	101.3	100.1	99.1
1943.....	112.1	92.9	100.1	98.7	96.9	February.....	115.6	95.0	101.5	100.2	99.2
1944.....	113.2	94.1	100.8	99.6	98.5	March.....	115.7	95.0	101.6	100.4	99.2
						April.....	116.8	95.0	101.8	100.5	99.3
						May.....	117.7	95.0	101.8	100.6	99.4

*Weekly Fluctuations*

Weekly changes in wholesale prices by groups of commodities during April and May 1945 are shown by the index numbers in table 4. These indexes are not averaged to obtain an index for the month but are computed only to indicate the fluctuations from week to week.

TABLE 4.—Weekly Index Numbers of Wholesale Prices by Commodity Groups, April and May 1945

[1926=100]

Commodity group	May 26	May 19	May 12	May 5	Apr. 28	Apr. 21	Apr. 14	Apr. 7
All commodities.....	105.9	105.8	105.7	105.7	105.7	105.6	105.5	105.1
Farm products.....	130.5	129.5	129.5	129.8	130.5	129.5	128.9	127.2
Foods.....	107.4	106.8	106.6	106.5	106.5	105.7	105.5	104.9
Hides and leather products.....	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3
Textile products.....	99.1	99.1	99.1	99.1	99.1	99.1	99.1	99.2
Fuel and lighting materials.....	84.6	84.6	84.3	84.0	83.9	83.9	84.0	84.0
Metals and metal products.....	104.4	104.3	104.4	104.3	104.3	104.3	104.3	104.3
Building materials.....	117.2	117.2	117.2	117.0	117.0	117.0	117.0	117.0
Chemicals and allied products.....	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9
Housefurnishing goods.....	106.2	106.2	106.2	106.2	106.2	106.2	106.2	106.2
Miscellaneous.....	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6
Raw materials.....	118.5	117.9	117.9	117.8	118.2	117.7	117.3	116.1
Semi-manufactured articles.....	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.9
Manufactured products.....	102.1	102.1	102.0	102.0	101.9	101.9	102.0	101.9
All commodities other than farm products.....	100.5	100.5	100.4	100.4	100.3	100.3	100.4	100.3
All commodities other than farm products and foods.....	99.7	99.7	99.6	99.5	99.5	99.5	99.5	99.5

# Labor Turnover

## Labor Turnover in Munitions and Nonmunitions Industries, 1943 and 1944<sup>1</sup>

### Summary

LABOR turnover—the movement of workers out of and into business establishments—is always a vital factor in production. Even in times of economic depression some persons quit their jobs voluntarily, although greater numbers are laid off because of curtailment in production. In periods of prosperity and expanding job opportunities the volume and aspect of turnover change: the number of voluntary quits tends to increase, while lay-offs decrease. In a period of urgent need for reaching and maintaining high levels of production, like that of the war years, labor turnover assumes particular importance, not only as an item of cost accounting but also as a vital element in the whole problem of efficient manpower utilization.

This analysis by the Bureau of Labor Statistics throws light on the relative levels of turnover in munitions and nonmunitions industries. In 1943 and 1944 the average quit rate in the munitions industries was 44 per 1,000 employees, as compared with a rate of 63 per 1,000 in the nonmunitions industries. The rate of total separations was 66 per 1,000 in munitions industries, as compared with 80 per 1,000 in other industries. The highest rates in each series occurred in August and September, when students and teachers left vacation jobs to return to school. A secondary seasonal peak in the spring of each year was caused largely by the return of agricultural workers to the farms.

The various components of labor turnover, averaged over the 2-year period, are shown in the following tabulation:

	Rate per 1,000 employees	
	Munitions industries	Nonmunitions industries
All separations.....	66	80
Quits.....	44	63
Discharges.....	8	5
Lay-offs.....	6	6
Military and miscellaneous.....	8	6
Accessions.....	64	75

The relatively higher discharge rates in the munitions industries, ranging from 6 to 9 per 1,000 employees, were, to a considerable degree, the consequence of mass hiring in critical war production plants without sufficient regard for workers' qualifications. In the nonmunitions industries discharges were 4 or 5 per 1,000. Beginning

<sup>1</sup> Prepared in the Bureau's Division of Employment Statistics by Margaret V. V. Buffum, assisted by Ruth E. Walther.

with November 1943, when the peak of employment in war production was reached, lay-offs were more frequent in the munitions than in the nonmunitions industries.

Because of the larger proportion of men employed in the manufacture of war goods, military separation rates were higher for munitions industries until the last quarter of 1944, when monthly withdrawals by the armed forces from both munitions and nonmunitions industries were stabilized at 2 per 1,000 employees.

Since April 1943, accession rates in the munitions division have been consistently lower than those for nonmunitions. Accession rates for both these branches of industry showed the same trends, with a seasonal peak in June at the beginning of school vacations, and a slight upturn in January, following the usual decline at the end of the year.

In each division quit rates for women workers were higher than those for men. At the same time the accession rates for women were generally higher than those for men.

### *Scope and Method of Study*

The Bureau of Labor Statistics regularly publishes monthly rates of total separations and the component items (quits, discharges, lay-offs, military and miscellaneous separations) and accessions in certain industries, groups of industries, and in manufacturing as a whole. The rates shown in this study are based on classifications used in these regular surveys. In the category of quits fall all separations from the job, undertaken voluntarily by the employee for any reason. The Bureau's quit rates are influenced by the fact that companies reporting labor-turnover information are instructed to report as quits all unauthorized absences of 7 or more workdays (whether for illness or for other reasons). A number of companies, because of union agreements or established accounting procedures, consider employees as having quit after only 3 to 5 days' absence. Some companies record as quits all persons who have been hired but who fail to report for work.

Discharges are terminations of employment initiated by the employer because of some fault either in ability or character, on the part of the worker. Lay-offs, although also initiated by the employer, involve no personal element, but are the result of some change in production schedule which necessitates reduction in the working force.

Military separations are defined to include all terminations of employment by both men and women workers for the express purpose of joining the armed forces, whether by voluntary enlistment or through the Selective Service System. The miscellaneous category covers only those separations from the work force which are due to retirement on pension, permanent disability, or death.

Accessions include both new employees and former employees who are rehired. Accession rates may be somewhat inflated by the fact that employees whose names have been automatically removed from the pay roll, because of unauthorized absence, are counted as accessions upon their return to work.

The present analysis covers the years 1943 and 1944. Although the munitions-production program was well started even at the time of the attack on Pearl Harbor, and most major conversions from peacetime to wartime production had taken place before the end of 1942, certain technical considerations dictated the choice of periods to be covered. Of prime importance was the fact that in January 1943 labor-turnover reports submitted to the Bureau of Labor Statistics were assigned to industry categories according to products currently manufactured in the respective plants, whereas prior to that time industrial classifications had been based on peacetime manufactures. Beginning in 1943 also, the labor-turnover data have covered all employees, instead of being limited to wage earners alone only as in previous years. Finally, in the early part of 1943, there was considerable expansion in the Bureau's coverage of industries vital to the war.

Rates for each industry division were obtained by weighting the several industry groups which it included. In order to facilitate the weighting procedure, assignment to munitions or nonmunitions was made on the basis of entire major industry groups, regardless of the fact that not all of the industries within a group would logically fall in the same category. Those industry groups in which the greater part of the products manufactured was for direct war use were assigned to the munitions division. Other groups were designated as nonmunitions, even though many plants, notably in the textile, apparel, leather, and food groups, worked under Army or Navy contracts.

### *General Trends in Labor Turnover*

Throughout the 2-year period covered, labor-turnover rates, with the exception of those for lay-offs, followed the same general patterns in both industry divisions, though at different levels. The peak of accession rates occurred in June of each year, when students and teachers were hired in large numbers. Separation rates were relatively high in August and September, when schools and colleges reopened. A secondary seasonal peak in the separation rates appeared in March, caused in large part by the withdrawal of farmers and others whose regular work depended on favorable weather conditions. Because of an increase in quits in the lower-paid industries, induced by rumors that workers were about to be "frozen" on their jobs, the April 1943 separation rate for nonmunitions continued at the same level as the previous month.

In both 1943 and 1944 there were 19 more quits for every 1,000 employees in the nonmunitions than in the munitions division. Total separation rates for nonmunitions were on the average higher by 16 in 1943, but by only 11 in 1944. The decrease in the divergence between the total separation rates for the two series reflected the influence of rising lay-off rates in the munitions division.

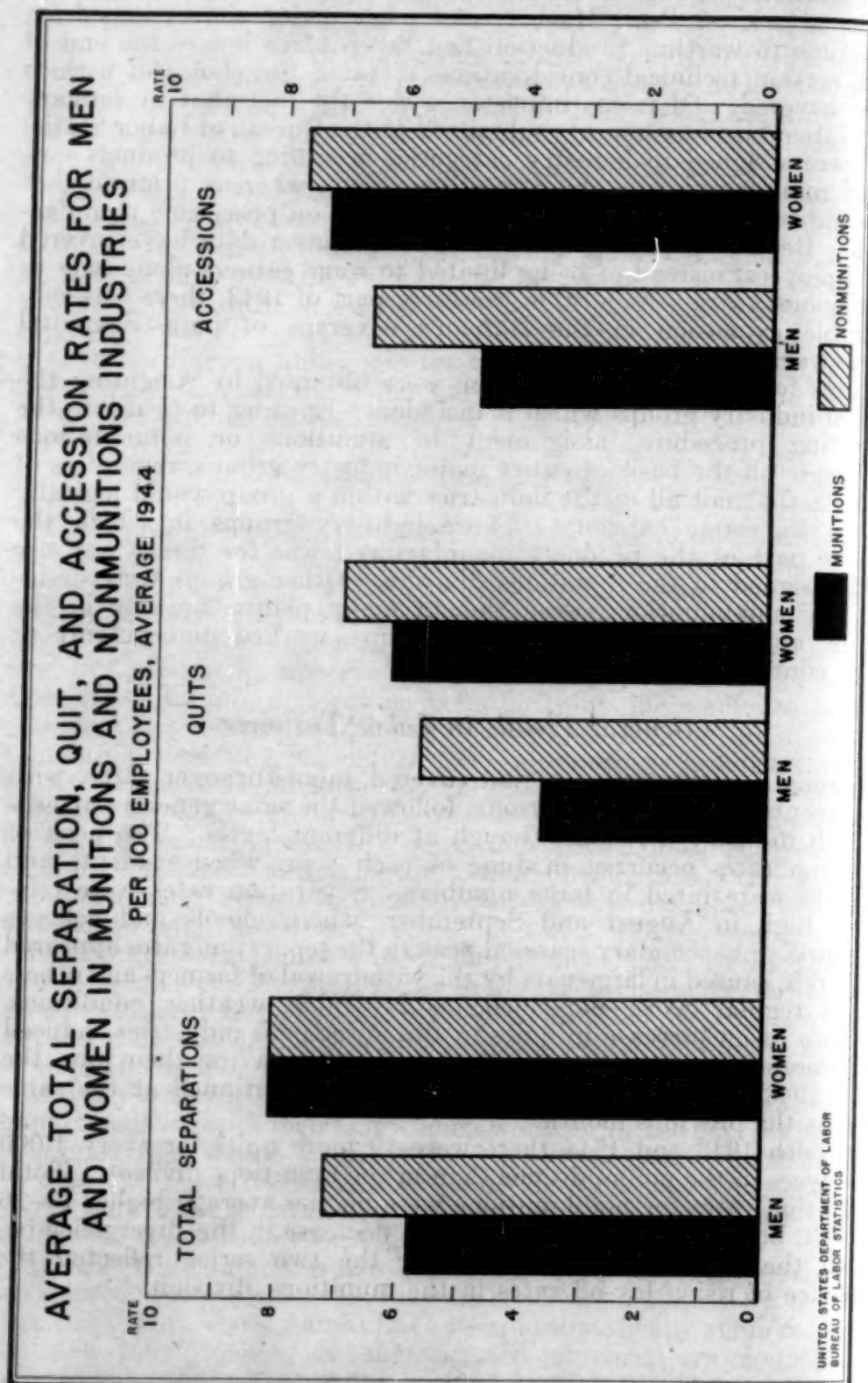


TABLE 1.—Monthly Labor-Turnover Rates (per 100 Employees) in Munitions and Nonmunitions Industries, 1943 and 1944<sup>1</sup>

Month	Munitions industries							Nonmunitions industries						
	Separation rates						Ac- ces- sion rates	Separation rates						Ac- ces- sion rates
	Total	Quit	Dis- charge	Lay- off	Mili- tary	Mis- cella- neous		Total	Quit	Dis- charge	Lay- off	Mili- tary	Mis- cella- neous	
1943														
January	6.5	3.9	0.6	0.4	1.5	0.1	8.7	8.2	5.3	0.5	1.2	1.0	0.2	8.2
February	8.2	3.8	.6	.3	1.4	.1	7.9	8.3	6.0	.4	.8	1.0	.1	8.2
March	7.0	4.6	.7	.3	1.3	.1	8.6	9.0	6.7	.5	.8	.9	.1	8.3
April	6.5	4.4	.6	.4	1.0	.1	7.4	9.0	6.9	.4	.9	.7	.1	7.6
May	6.0	4.1	.6	.4	.8	.1	7.0	7.6	5.9	.4	.6	.6	.1	7.6
June	6.4	4.4	.7	.4	.8	.1	8.2	8.2	6.4	.5	.6	.6	.1	8.9
July	7.0	4.9	.8	.4	.8	.1	7.6	8.5	6.7	.5	.6	.6	.1	8.3
August	7.6	5.5	.8	.4	.8	.1	7.4	9.1	7.4	.5	.6	.5	.1	8.1
September	7.6	5.4	.8	.5	.8	.1	7.6	9.3	7.7	.4	.6	.5	.1	8.1
October	6.6	4.5	.8	.5	.7	.1	6.7	7.9	6.3	.5	.5	.5	.1	8.0
November	6.0	3.9	.7	.7	.6	.1	6.0	6.9	5.3	.5	.6	.4	.1	7.7
December	6.2	3.8	.7	1.0	.6	.1	4.6	7.2	5.4	.5	.8	.4	.1	6.2
1944														
January	6.3	4.0	.8	.8	.6	.1	5.8	7.3	5.6	.5	.7	.4	.1	7.5
February	6.1	3.9	.8	.8	.5	.1	5.0	7.3	5.7	.5	.6	.4	.1	6.2
March	7.0	4.3	.8	1.0	.8	.1	5.2	8.0	6.2	.5	.6	.6	.1	6.6
April	6.3	4.2	.7	.6	.7	.1	5.0	7.6	6.1	.4	.5	.5	.1	6.3
May	6.6	4.5	.8	.5	.7	.1	5.6	8.1	6.7	.4	.5	.4	.1	7.5
June	6.8	4.7	.9	.6	.5	.1	6.6	7.9	6.8	.4	.3	.3	.1	9.2
July	6.1	4.3	.8	.5	.4	.1	5.6	7.2	6.1	.4	.4	.2	.1	7.3
August	7.4	5.4	.9	.7	.3	.1	5.6	8.8	7.6	.5	.4	.2	.1	7.2
September	7.4	5.4	.8	.8	.3	.1	5.3	8.4	7.3	.4	.4	.2	.1	7.1
October	6.3	4.5	.8	.7	.2	.1	5.4	7.0	6.0	.4	.3	.2	.1	6.8
November	5.7	4.0	.8	.6	.2	.1	5.4	6.8	5.7	.4	.4	.2	.1	7.0
December	5.2	3.6	.7	.6	.2	.1	4.6	6.5	5.3	.4	.5	.2	.1	5.7

<sup>1</sup> The munitions division includes the following major industry groups: Ordnance; iron and steel and their products; electrical machinery; machinery, except electrical; transportation equipment, except automobiles; automobiles; nonferrous metals and their products; chemicals and allied products; products of petroleum and coal; rubber products. The nonmunitions division includes the following groups: lumber and timber basic products; furniture and finished lumber products; stone, clay, and glass products; textile-mill products; apparel and other finished textile products; leather and leather products; food and kindred products; tobacco manufactures; paper and allied products; miscellaneous industries.

#### QUIT RATES

Fewer than 50 out of every 1,000 employees voluntarily left munitions jobs in any month of the period, except in August and September of each year, when vacation workers returned to school or college. Quit rates for nonmunitions industries averaged 63 per 1,000 employees in each year.

There were general causes of quits which concerned workers in all types of industry. Transportation difficulties, especially after the institution of tire and gasoline rationing, affected employees who commuted from nearby towns. Inadequate housing facilities in the vicinity of war plants caused many workers who had come from greater distances to return to their home towns. The normal desire for higher wages, and dissatisfaction with the type of work, working conditions or hours were, as always, common causes of quits.

Certain factors had a particular influence on the number of quits reported for the war industries during the 2-year period. In the early part of 1943, rumors of the impending "job freeze" caused some workers to leave those essential industries in which, as in foundries, a War Labor Board order had frozen wages at comparatively low levels. At the beginning of spring in 1943 fishermen on the West Coast and

sailors from the Great Lakes region left shipyards and aircraft plants to return to their regular work. Workers on the "victory" shift of four evening hours were sometimes obliged to quit because of changes in shift assignments on their regular full-time jobs. The completion or cancellation of contracts, occurring frequently in munitions industries because of changing requirements, was usually preceded by an increased number of quits, as some employees were unwilling to stay on the job until lay-offs became general.

An important factor in the high quit rates for the nonmunitions division was the lower level of wage scales prevailing in the component industries. Throughout the period workers in large numbers quit to go to the higher-paying war industries. In most months a considerable part of the movement out of nonmunitions industries was also directly due to War Manpower Commission regulations designed to force workers into essential production.

Since quits occur with greater frequency among women workers than among men (table 2, p. 150), the fact that women were employed in relatively larger numbers in nonmunitions industries was also partly responsible for the high quit rates in that division. In addition to all the factors which influenced men to quit, there were special problems affecting women. Marriage was frequently given as a reason for leaving work. Young wives followed their soldier husbands to the vicinity of military camps, sometimes taking jobs in nearby factories, and leaving when their husbands were transferred. Mothers unable to find persons to care for their children were forced to give up jobs to remain at home. Even if the day care of their children was assured, some women found the double burden of a factory job and house-keeping beyond their strength.

#### DISCHARGE RATES

Discharge rates, which remained fairly constant in each division, were consistently higher for munitions, ranging from 6 to 9 per 1,000 employees. Because of the need for expanding the work force in the war industries with all possible speed, there was too little time for proper selection of employees. Many were hired who were not used to regular work, or who would not normally have any job. Discharges in both munitions and nonmunitions were for poor attendance, inefficiency, drunkenness, or infraction of rules, especially those pertaining to safety practices.

#### LAY-OFF RATES

During most of 1943 lay-off rates in the munitions industries were below those for nonmunitions. However, as the November peak was approached, the lay-off rate in the munitions division rose, until by October of that year it was the same as that for nonmunitions, and was higher in every subsequent month of the 2-year period. As was to be expected, lay-off rates in the war industries were low during the early part of 1943 while the various production programs were being expanded. However, even as early as January 1943 the need for allocating scarce raw materials to the more important lines of war production was causing shortages, with consequent lay-offs of workers, not only in nonmunitions but also in the less-vital industries of the munitions division. In April 1943 the effect of cut-backs in the

production of bombs and tanks was beginning to be evident. In September 1943 the lay-off rate for munitions industries began to reflect the first cut-backs in the small-arms ammunition program, which were most pronounced in December 1943 and March 1944. In both these months there was also noticeable reduction of employment in firearms factories, some of which reconverted to peacetime manufactures. Cancellation of contracts for light airplanes also was a factor in the high lay-off rate for March 1944.

#### MILITARY SEPARATION RATES

Throughout most of the 2-year period, military separation rates were higher in the munitions than in the nonmunitions division. Allowing for the fact that some men engaged in war production had draft deferments on occupational grounds, there still was in the munitions industries a larger reserve of men from which military demands could be met. The fact that proportionately fewer women were employed in munitions as compared with nonmunitions industries accounted for some of the difference between the two series of military separation rates. Although military separations occur chiefly among men, the rates, like those for other items of labor turnover, are based on all employees, women as well as men. A relatively large proportion of women in the work force, as in the case of nonmunitions industries, will tend to deflate this rate.

As the armed forces reached required strength, military separation rates gradually declined from January 1943 (with the exception of a brief upturn in the spring of 1944), until in the last quarter of 1944 they were stabilized at 2 per 1,000 employees in both divisions. Sharply increased demands by the armed forces for replacements accounted for the high military separation rates in March, April, and May 1944. During this period the increase in the rate was greater for munitions than for nonmunitions industries. This was due in part to loss of occupational deferments resulting from further cut-backs in the manufacture of small-arms ammunition, and reductions in machine-tool, aircraft, and shipbuilding programs.

#### MISCELLANEOUS SEPARATION RATES

Miscellaneous separation rates, which relate only to deaths, retirement on pension, or permanent disability of employees, remained stable at 1 per 1,000.

#### ACCESSION RATES

In the first quarter of 1943, taken as a whole, accession rates in the munitions division were slightly higher than those for nonmunitions. In April 1943, coincident with the start of a continuing upward trend in the lay-off rates for munitions, the accession rate for this division fell below that for nonmunitions, and continued at a lower level for the remainder of the 2-year period. The general trend of accession rates was the same for each division, the peak in June of each year reflecting the hiring of students and teachers at the close of the school term. The seasonally low rate in December was the result, apparently, of the unwillingness of available workers to take new jobs at the Christmas season, and of employers to increase their work force just before inventory time. This was compensated for by the usual slight

upturn in January. The accession rate in January 1944 was inflated somewhat by the rehiring of employees who, because of extended absences during the influenza epidemic of December 1943, had previously been reported as quits. In 1944 accession rates in the munitions division, though lower than those in 1943, were still adequate in all months but August and September to compensate for all losses other than those caused by discharges and lay-offs.

### *Comparison of Turnover Rates for Men and Women*

As has previously been pointed out, quit rates in the munitions group were, throughout 1944, consistently lower than those in the nonmunitions group. The same was true for men and women workers separately. Quit rates for men were lower in munitions than in nonmunitions by approximately 35 percent. On the other hand, quit rates for women in munitions were lower than in nonmunitions by only 12 percent. The special circumstances, already noted, which influenced women to quit affected all women workers, regardless of the importance of the work they might be performing. Quit rates for men munitions workers, except in August and September when vacation workers were returning to school, were consistently below 40 per 1,000; for women they averaged nearly 60 per 1,000 during the same period. In each division, quit rates for men were lower than those for women employees. The differences between the two series were, however, more noticeable in the munitions industries where manpower controls, though pertaining to all workers in essential war production, affected men to a greater degree.

TABLE 2.—*Monthly Labor Turnover Rates (per 100 Employees) for Men and Women in Munitions and Nonmunitions Industries, 1944*

Months	Men workers						Women workers					
	Munitions			Nonmunitions			Munitions			Nonmunitions		
	Separation rates		Accession rates	Separation rates		Accession rates	Separation rates		Accession rates	Separation rates		Accession rates
	Total	Quit		Total	Quit		Total	Quit		Total	Quit	
January.....	5.8	3.4	5.3	7.1	5.2	7.1	7.9	5.9	7.8	7.6	6.2	7.9
February.....	5.5	3.3	4.4	7.3	5.2	5.8	7.6	5.4	6.8	7.2	6.1	6.8
March.....	6.5	3.9	4.5	8.1	6.0	6.2	8.4	5.8	7.3	7.7	6.5	7.4
April.....	5.8	3.6	4.3	7.5	5.7	5.8	7.6	5.8	7.0	7.8	6.6	7.0
May.....	6.1	3.8	4.7	7.8	6.1	6.9	8.0	6.3	8.0	8.4	7.5	8.3
June.....	6.0	3.9	5.5	7.5	6.1	8.5	8.5	6.6	9.4	8.5	7.6	10.0
July.....	5.5	3.6	4.8	6.5	5.2	6.8	8.0	6.3	7.9	8.4	7.4	8.2
August.....	6.6	4.6	4.9	8.1	6.8	6.4	9.5	7.6	7.8	9.7	8.6	8.3
September.....	6.4	4.5	4.6	7.5	6.4	6.1	9.8	7.8	7.5	9.4	8.5	8.6
October.....	5.6	3.8	4.8	6.4	5.3	6.0	8.1	6.2	7.1	7.8	7.0	7.9
November.....	5.0	3.4	5.1	6.4	5.2	7.0	7.4	5.5	6.5	7.3	6.3	7.1
December.....	4.5	3.0	4.5	6.2	4.9	6.3	6.4	4.9	4.9	7.0	6.0	4.5

Comparison of quit and total separation rates provides a rough idea of the extent of involuntary separations—those caused chiefly by discharges, lay-offs, and inductions into the armed forces. The dif-

ferences between total separation and quit rates indicate that the relatively greater numbers of involuntary separations, which in 1944 were characteristic of the munitions division, involved both men and women workers. Making allowance for military separations, which in the main affected men rather than women, it is apparent that proportionally more women than men munitions workers were discharged or laid off in each month of 1944.



### Labor Turnover in Manufacturing, Mining, and Public Utilities, April 1945

FOR every 1,000 workers on factory pay rolls in April, 48 quit, 6 were discharged, 8 were laid off, and 4 left to enter the armed services. The accession rate, 46 per 1,000, was the lowest since November 1941, the month before the attack on Pearl Harbor.

The total separation rate for all manufacturing, 66 per 1,000, was slightly below that of both March 1945 and April 1944. Only 4 of the 20 major manufacturing groups showed increases in the total separation rate. In 2 of these, transportation equipment and automobiles, the increases in separations reflected lay-offs resulting from contract cancellations and product changes.

In manufacturing as a whole, the lay-off rate of 8 per 1,000 was the highest since March 1944. The increase in lay-offs from 9 to 11 in the munitions group was almost wholly responsible for the general increase. The transportation-equipment group laid off workers at the rate of 25 per 1,000, the highest rate for all manufacturing groups. Curtailed production schedules in shipbuilding and in the aircraft parts industries accounted for this rise. Lay-off rates of 10 per 1,000 were reported by both the ordnance and automobile groups. In ordnance, cut-backs in the production of guns and heavy ammunition necessitated the dismissal of large numbers of workers. Although lay-offs decreased for the iron and steel group, firms making ship parts in the fabricated structural metal products industry laid off workers at the rate of 21 per 1,000.

The discharge rate dropped slightly over the month but was on the same level with that of 1 year ago. This rate dropped from 9 to 8 per 1,000 in the munitions group, while that for the nonmunitions group remained the same.

The military separation rate remained at 4 per 1,000 in spite of increased rates in the machinery, transportation equipment, miscellaneous, and petroleum products groups.

Accessions outweighed separations in the metal-mining group. A marked increase in the rate of hiring was found in both copper-ore and iron-ore mining. In the anthracite and bituminous-coal mining industries, as in all manufacturing, the hiring rate failed to compensate for the quit rate. The declines in the accession rates in coal mining may be attributed to labor unrest pending coal-contract settlements.

Women continued to quit at a much higher rate than men in manufacturing work. Involuntary separations were approximately the same for both.

TABLE 1.—Monthly Labor-Turnover Rates (per 100 Employees) in Manufacturing<sup>1</sup>

Class of turnover and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total separation:												
1945.....	6.2	6.0	6.8	<sup>2</sup> 6.6								
1944.....	6.7	6.6	7.4	6.8	7.1	7.1	6.6	7.8	7.6	6.4	6.0	5.7
1943.....	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.6
1939.....	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.5
Quit:												
1945.....	4.6	4.3	5.0	<sup>2</sup> 4.8								
1944.....	4.6	4.6	5.0	4.9	5.3	5.4	5.0	6.2	6.1	5.0	4.6	4.3
1943.....	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.4
1939.....	.9	.6	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.7
Discharge:												
1945.....	.7	.7	.7	<sup>2</sup> .6								
1944.....	.7	.6	.7	.6	.6	.7	.7	.7	.6	.6	.6	.6
1943.....	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1939.....	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1
Lay-off: <sup>3</sup>												
1945.....	.6	.7	.7	<sup>2</sup> .8								
1944.....	.8	.8	.9	.6	.5	.5	.5	.5	.6	.5	.5	.5
1943.....	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	1.0
1939.....	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.7
Military and miscellaneous: <sup>4</sup>												
1945.....	.3	.3	.4	<sup>2</sup> .4								
1944.....	.6	.6	.8	.7	.7	.5	.4	.4	.3	.3	.3	.3
1943.....	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6
Accession:												
1945.....	7.0	5.0	4.9	<sup>2</sup> 4.6								
1944.....	6.5	5.5	5.8	5.5	6.4	7.6	6.3	6.3	6.1	6.0	6.1	4.9
1943.....	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	5.2
1939.....	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	2.8

<sup>1</sup> Month-to-month employment changes as indicated by labor turnover rates are not precisely comparable to those shown by the Bureau's employment and pay-roll reports, as the former are based on data for the entire month while the latter refer, for the most part, to a 1-week period ending nearest the middle of the month. In addition, labor turnover data, beginning in January 1943, refer to all employees, whereas the employment and pay-roll reports relate only to wage earners. The labor turnover sample is not so extensive as that of the employment and pay-roll survey, proportionately fewer small plants are included; printing and publishing and certain seasonal industries, such as canning and preserving, are not covered.

<sup>2</sup> Preliminary.

<sup>3</sup> Including temporary, indeterminate, and permanent lay-offs.

<sup>4</sup> Miscellaneous separations comprise not more than 0.1 in these figures. In 1939 these data were included with quits.

TABLE 2.—Monthly Labor-Turnover Rates (per 100 Employees) in Selected Groups and Industries,<sup>1</sup> April 1945<sup>2</sup>

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.
<i>Manufacturing</i>												
Munitions <sup>3</sup> .....	6.4	6.5	4.1	4.3	0.8	0.9	1.1	0.9	0.4	0.4	4.1	4.4
Nonmunitions <sup>3</sup> .....	6.8	7.3	5.7	6.1	.4	.4	.4	.5	.3	.3	5.5	5.7
Ordnance.....	8.0	8.3	5.5	5.9	1.1	1.2	1.0	.8	.4	.4	6.1	6.5
Guns, howitzers, mortars, and related equipment.....	6.8	6.0	3.5	3.6	.8	.8	2.0	1.2	.5	.4	4.6	5.5
Ammunition, except for small arms.....	9.0	9.2	6.4	6.8	1.2	1.4	1.0	.6	.4	.4	6.8	7.0
Tanks.....	6.7	8.2	4.8	5.3	1.1	1.2	.5	1.3	.3	.4	6.3	8.3
Sighting and fire-control equipment.....	3.5	3.6	2.1	2.2	.5	.4	.6	.7	.3	.3	2.6	2.6
Iron and steel and their products.....	4.4	4.7	3.3	3.4	.4	.5	.3	.4	.4	.4	3.5	3.7
Blast furnaces, steel works, and rolling mills.....	2.9	3.2	2.3	2.4	.2	.2	.1	.2	.3	.4	2.6	2.7
Gray-iron castings.....	6.8	6.9	5.4	5.5	.7	.6	.3	.3	.4	.5	4.9	5.4
Malleable-iron castings.....	5.7	6.7	4.9	5.5	.4	.6	.1	.1	.3	.5	4.2	4.1
Steel castings.....	6.3	6.6	5.0	5.2	.8	.8	.1	.2	.4	.4	5.2	5.3
Cast-iron pipe and fittings.....	8.4	7.9	6.0	6.1	1.6	1.0	.4	.3	.4	.5	6.3	6.6
Tin cans and other tinware.....	9.6	10.9	6.7	7.6	2.3	2.7	.2	.2	.4	.4	9.8	11.3
Wire products.....	2.8	3.6	2.0	2.6	.2	.3	.1	.2	.5	.5	2.5	2.9
Cutlery and edge tools.....	5.4	5.1	4.4	4.1	.5	.8	.1	.1	.4	.1	5.3	4.0

See footnotes at end of table.

TABLE 2.—Monthly Labor-Turnover Rates (per 100 Employees) in Selected Groups and Industries,<sup>1</sup> April 1945<sup>2</sup>—Continued

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.
Iron and steel, etc.—Continued.												
Tools (except edge tools, machine tools, files, and saws).....	4.7	5.4	3.8	4.5	0.4	0.5	0.1	(4)	0.4	0.4	3.4	4.4
Hardware.....	3.9	4.1	3.2	3.4	.3	.3	.1	.2	.3	.2	4.0	4.6
Stoves, oil burners, and heating equipment.....	7.5	11.4	5.2	7.0	.8	1.5	.9	2.3	.6	.6	5.9	5.7
Steam and hot-water heating apparatus and steam fittings.....	5.9	5.1	4.9	4.2	.4	.4	.2	.2	.4	.3	4.9	5.3
Stamped and enameled ware and galvanizing.....	6.5	6.9	4.9	5.7	.7	.7	.3	(4)	.6	.5	6.8	6.5
Fabricated structural-metal products.....	8.7	7.3	5.3	4.8	.7	.8	2.1	1.2	.6	.5	4.2	4.7
Bolts, nuts, washers, and rivets.....	4.6	4.6	3.6	2.7	.5	.9	.2	.7	.3	.3	3.1	3.3
Forgings, iron and steel.....	4.9	4.7	3.3	3.5	.5	.6	.7	.2	.4	.4	3.0	3.6
Firearms (60 caliber and under).....	6.1	7.9	3.2	3.3	.6	.7	2.0	3.6	.3	.3	3.3	3.2
Electrical machinery.....	4.3	4.8	3.2	3.5	.5	.6	.3	.4	.3	.3	3.5	3.9
Electrical equipment for industrial use.....	3.4	4.1	2.5	3.0	.4	.4	.2	.3	.3	.4	2.8	3.2
Radios, radio equipment, and phonographs.....	4.6	5.4	3.5	3.9	.6	.6	.2	.6	.3	.3	3.8	4.6
Communication equipment, except radios.....	4.6	4.4	3.6	3.1	.7	.9	(4)	.1	.3	.3	4.4	3.5
Machinery, except electrical.....	4.5	4.7	3.2	3.4	.5	.6	.3	.3	.5	.4	3.2	3.4
Engines and turbines.....	5.0	5.5	3.2	3.7	.7	.7	.6	.6	.5	.5	3.5	3.4
Agricultural machinery and tractors.....	4.6	5.6	3.7	4.5	.3	.5	.1	.2	.5	.4	3.2	3.1
Machine tools.....	3.6	3.4	2.2	2.3	.6	.6	.4	.1	.4	.4	2.2	2.4
Machine-tool accessories.....	3.5	4.5	2.2	2.6	.7	.9	.3	.6	.3	.4	3.0	3.4
Metalworking machinery and equipment, not elsewhere classified.....	3.7	4.5	2.6	3.0	.5	.9	.2	.2	.4	.4	3.4	3.7
General industrial machinery, except pumps.....	4.9	4.8	3.4	3.4	.6	.6	.4	.4	.5	.4	3.4	3.8
Pumps and pumping equipment.....	5.3	4.7	4.0	3.2	.7	.9	(4)	(4)	.6	.6	4.9	4.1
Transportation equipment, except automobiles.....	9.0	8.4	4.9	4.9	1.1	1.3	2.5	1.8	.5	.4	3.9	4.1
Aircraft.....	7.3	6.0	4.6	4.5	.7	.7	1.4	.4	.6	.4	3.2	3.7
Aircraft parts, including engines.....	5.7	4.9	3.0	2.9	.6	.6	1.7	1.1	.4	.3	3.1	3.5
Shipbuilding and repairs.....	12.8	12.4	6.4	6.4	1.8	2.2	4.0	3.3	.6	.5	4.8	4.9
Automobiles.....	6.5	6.3	4.3	4.6	.8	.9	1.0	.4	.4	.4	5.2	5.7
Motor vehicles, bodies, and trailers.....	6.3	5.5	3.7	3.8	.8	.8	1.4	.6	.4	.3	4.5	4.5
Motor-vehicle parts and accessories.....	6.6	6.9	4.7	5.2	.8	1.0	.7	.3	.4	.4	5.8	6.6
Nonferrous metals and their products.....	6.3	6.3	4.7	4.8	.6	.7	.6	.4	.4	.4	5.9	6.3
Primary smelting and refining, except aluminum and magnesium.....	3.8	3.5	3.0	2.9	.3	.3	.1	(4)	.4	.3	3.3	3.2
Aluminum and magnesium smelting and refining.....	10.4	7.8	7.7	6.5	.3	.4	1.9	.5	.5	.4	9.5	9.4
Rolling and drawing of copper and copper alloys.....	4.0	4.5	3.1	3.4	.6	.7	.1	.1	.2	.3	3.7	4.3
Aluminum and magnesium products.....	7.5	7.4	5.4	5.5	.7	.8	.9	.6	.5	.5	7.2	7.6
Lighting equipment.....	6.4	6.6	5.7	5.3	.3	.6	.1	.3	.3	.4	5.0	4.7
• Nonferrous-metal foundries, except aluminum and magnesium.....	5.7	5.9	4.2	4.5	.6	.7	.6	.3	.3	.4	4.2	4.7
Lumber and timber basic products.....	9.2	10.6	7.5	8.2	.4	.4	.8	1.5	.5	.5	8.0	7.9
Sawmills.....	9.0	10.1	7.4	8.0	.3	.3	.8	1.3	.5	.5	7.9	7.8
Planing and plywood mills.....	7.3	7.3	6.0	5.7	.6	.6	.1	.5	.6	.5	5.8	5.7
Furniture and finished lumber products.....	8.5	9.0	7.4	7.8	.6	.5	.2	.4	.3	.3	7.5	7.6
Furniture, including mattresses and bedsprings.....	8.3	9.2	7.2	7.9	.6	.6	.2	.4	.3	.3	7.5	7.6
Stone, clay, and glass products.....	5.2	5.5	4.1	4.2	.3	.4	.3	.4	.5	.5	4.2	4.7
Glass and glass products.....	5.5	6.0	3.9	4.3	.5	.6	.5	.5	.6	.6	4.3	5.0
Cement.....	4.0	4.2	3.2	2.9	.3	.2	.1	.6	.4	.5	4.1	5.0
Brick, tile, and terra cotta.....	5.7	6.5	4.5	4.7	.3	.6	.3	.7	.6	.5	4.8	5.0
Pottery and related products.....	5.8	5.6	5.3	4.9	.2	.2	(4)	.2	.3	.3	4.8	4.8

See footnotes at end of table.

TABLE 2.—Monthly Labor-Turnover Rates (per 100 Employees) in Selected Groups and Industries,<sup>1</sup> April 1945<sup>2</sup>—Continued

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.	Mar.
Textile-mill products.....	6.4	6.6	5.5	5.7	0.3	0.4	0.3	0.2	0.3	0.3	5.0	5.1
Cotton.....	7.6	7.9	6.7	6.9	.4	.5	.2	.2	.3	.3	5.9	6.2
Silk and rayon goods.....	6.4	6.8	5.4	5.7	.4	.5	.3	.2	.3	.4	5.2	5.4
Woolen and worsted, except dyeing and finishing.....	4.1	4.2	2.9	3.4	.2	.2	.7	.4	.3	.2	3.2	3.2
Hosiery, full fashioned.....	4.2	4.8	3.6	4.2	.2	.2	.2	.2	.2	.2	2.7	2.9
Hosiery, seamless.....	6.3	6.1	5.8	5.4	.2	.3	.1	.3	.2	.1	4.8	4.9
Knitted underwear.....	5.6	5.6	4.4	5.1	.2	.2	.9	.2	.1	.1	4.1	4.3
Dyeing and finishing textiles, including woolen and worsted.....	4.1	4.2	3.1	3.1	.4	.5	.2	.2	.4	.4	3.0	3.6
Apparel and other finished textile products.....	5.4	5.7	4.7	5.1	.2	.2	.4	.3	.1	.1	4.2	4.6
Men's and boys' suits, coats, and overcoats.....	4.1	4.3	3.8	3.9	.1	.1	.1	.2	.1	.1	3.1	3.5
Men's and boys' furnishings, work clothing, and allied garments.....	5.3	5.6	4.8	5.2	.2	.2	.2	.1	.1	.1	4.4	4.4
Leather and leather products.....	5.5	5.7	5.0	4.9	.2	.3	.1	.2	.2	.3	4.7	5.1
Leather.....	4.2	4.7	3.7	3.7	.2	.5	( <sup>4</sup> )	.1	.3	.4	3.8	3.5
Boots and shoes.....	5.8	5.9	5.3	5.1	.2	.3	.1	.2	.2	.3	5.0	5.4
Food and kindred products.....	8.7	9.6	7.3	8.0	.5	.5	.5	.7	.4	.4	6.7	6.5
Meat products.....	8.0	10.1	6.7	8.0	.4	.5	.5	1.1	.4	.5	4.6	4.4
Grain-mill products.....	10.8	11.5	9.5	10.2	.7	.9	( <sup>4</sup> )	.1	.6	.3	9.8	8.7
Tobacco manufactures.....	8.2	9.1	7.5	7.9	.4	.4	.2	.6	.1	.2	7.2	7.3
Paper and allied products.....	6.0	7.1	5.1	5.9	.4	.5	.1	.2	.4	.5	5.3	5.9
Paper and pulp.....	5.8	6.6	4.7	5.5	.4	.4	.2	.2	.5	.5	4.7	5.5
Paper boxes.....	7.3	8.0	6.4	6.8	.4	.6	.1	.2	.4	.4	7.0	7.0
Chemicals and allied products.....	5.5	5.7	4.3	4.4	.6	.7	.2	.2	.4	.4	5.2	5.6
Paints, varnishes, and colors.....	2.9	4.1	2.2	2.7	.3	.7	( <sup>4</sup> )	.4	.4	.3	2.2	2.8
Rayon and allied products.....	4.9	4.6	3.6	3.8	.3	.3	.4	.1	.6	.4	3.9	3.8
Industrial chemicals, except explosives.....	3.9	4.5	3.0	3.3	.4	.6	.2	.2	.3	.4	3.6	3.6
Explosives.....	6.9	7.2	5.6	5.9	.8	.8	( <sup>4</sup> )	( <sup>4</sup> )	.5	.5	8.5	8.8
Small-arms ammunition.....	7.5	7.2	6.0	5.6	.9	1.0	.2	.3	.4	.3	6.1	7.7
Products of petroleum and coal.....	3.2	2.9	2.0	2.0	.3	.3	.5	.3	.4	.3	2.9	3.2
Petroleum refining.....	3.1	3.0	1.9	2.0	.3	.3	.5	.4	.4	.3	2.8	3.2
Rubber products.....	5.7	5.9	4.8	4.8	.4	.5	.2	.2	.3	.4	4.4	4.7
Rubber tires and inner tubes.....	5.4	5.6	4.6	4.4	.4	.6	.1	.2	.3	.4	4.0	4.5
Rubber footwear and related products.....	6.8	7.6	6.1	6.9	.3	.4	.1	( <sup>4</sup> )	.3	.3	5.1	5.8
Miscellaneous rubber industries.....	5.8	6.1	4.7	5.2	.5	.5	.3	.1	.3	.3	4.8	4.8
Miscellaneous industries.....	4.2	3.8	2.9	2.7	.6	.5	.3	.3	.4	.3	2.8	3.2
<i>Nonmanufacturing</i>												
Metal mining.....	4.5	4.5	3.7	3.5	.3	.4	.2	.2	.3	.4	4.7	3.9
Iron-ore.....	2.6	2.4	1.9	1.7	.1	.2	.3	.2	.3	.3	3.9	2.9
Copper-ore.....	5.2	5.2	4.3	4.2	.3	.4	.2	.1	.4	.5	5.4	3.7
Lead- and zinc-ore.....	6.1	6.0	5.3	4.9	.3	.5	.1	.1	.4	.5	4.5	4.8
Metal mining, not elsewhere classified, including aluminum-ore.....	5.3	5.7	4.2	4.2	.8	.8	.1	.4	.2	.3	5.6	5.7
Coal mining:												
Anthracite mining.....	1.5	1.7	1.1	1.0	( <sup>4</sup> )	( <sup>4</sup> )	.2	.5	.2	.2	.9	1.0
Bituminous-coal mining.....	3.3	4.1	2.8	3.3	.2	.2	.1	.2	.2	.4	2.5	2.8
Public utilities:												
Telephone.....	2.9	2.8	2.6	2.5	.1	.1	.1	.1	.1	.1	3.3	3.1
Telegraph.....	3.4	3.5	3.1	3.1	.1	.1	.1	.2	.1	.1	2.6	2.7

<sup>1</sup> Since January 1943 manufacturing firms reporting labor turnover have been assigned industry codes on the basis of current products. Most plants in the employment and pay-roll sample, comprising those which were in operation in 1939, are classified according to their major activity at that time, regardless of any subsequent change in major products.

<sup>2</sup> Preliminary figures.

<sup>3</sup> The munitions division which replaces the Selected War Industries group, include the following major industry groups: ordnance; iron and steel; electrical machinery; machinery, except electrical; automobiles; transportation equipment, except automobiles; nonferrous metals; chemicals; products of petroleum and coal; rubber. The nonmunitions division includes lumber; furniture and finished lumber products; stone, clay, and glass; textile-mill products; apparel and finished textile products; leather; food and kindred products; tobacco; paper and pulp; miscellaneous industries. Comparable data for 1943 and 1944 appear on p. 143 of this issue of the Review.

<sup>4</sup> Less than 0.05.

TABLE 3.—*Monthly Labor-Turnover Rates (per 100 Employees)<sup>1</sup> for Men and Women in Selected Industries Engaged in War Production, April 1945<sup>2</sup>*

Industry group and industry		Total separation		Quit		Total accession	
		Men	Women	Men	Women	Men	Women
All manufacturing.....		6.0	7.9	4.2	6.0	4.0	6.0
Ordnance.....		6.8	10.0	4.5	7.2	5.1	7.8
Guns, howitzers, mortars, and related equipment.....		5.9	9.5	3.0	5.1	3.3	9.1
Ammunition, except for small arms.....		7.7	10.5	5.3	7.8	5.8	8.1
Tanks.....		5.8	8.5	4.0	5.7	5.7	8.2
Sighting and fire-control equipment.....		2.6	4.9	1.5	3.3	1.7	4.1
Iron and steel and their products.....		4.2	6.6	3.1	5.1	3.2	6.1
Blast furnaces, steel works, and rolling mills.....		2.8	5.1	2.1	4.4	2.5	5.3
Gray-iron castings.....		6.6	10.1	5.3	5.8	4.9	5.2
Malleable-iron castings.....		5.6	7.1	4.9	5.4	4.1	4.6
Steel castings.....		6.3	7.0	5.0	5.3	5.2	5.8
Cast-iron pipe and fittings.....		8.3	8.8	5.8	7.3	6.2	7.0
Firearms (60 caliber and under).....		5.7	10.0	2.8	5.0	2.8	5.0
Electrical machinery.....		3.2	5.5	2.1	4.4	2.3	4.9
Electrical equipment for industrial use.....		2.5	5.0	1.6	4.0	1.7	4.4
Radios, radio equipment, and phonographs.....		3.4	5.4	2.3	4.4	2.6	4.8
Communication equipment, except radios.....		3.4	5.6	2.4	4.6	2.3	6.2
Machinery, except electrical.....		4.2	5.9	2.8	4.6	2.7	5.0
Engines and turbines.....		4.5	6.5	2.8	4.5	2.8	5.6
Machine tools.....		3.5	4.6	2.0	3.7	2.0	3.7
Machine-tool accessories.....		3.2	4.6	1.9	3.4	2.5	4.6
Metalworking machinery and equipment, not elsewhere classified.....		3.5	4.7	2.4	3.5	2.9	5.7
General industrial machinery, except pumps.....		4.4	6.3	2.9	5.1	2.8	5.2
Pumps and pumping equipment.....		4.6	7.8	3.1	7.1	3.7	9.0
Transportation equipment, except automobiles.....		8.6	10.1	4.5	6.1	3.5	5.2
Aircraft.....		6.2	9.0	3.6	6.2	2.5	4.4
Aircraft parts, including engines.....		4.4	8.6	2.4	4.3	2.4	4.8
Shipbuilding and repairs.....		13.0	15.4	6.4	8.8	4.9	7.8
Nonferrous metals and their products.....		6.2	7.2	4.5	5.6	5.4	7.6
Primary smelting and refining, except aluminum and magnesium.....		3.6	5.8	2.9	4.5	3.2	4.8
Aluminum and magnesium smelting and refining.....		10.4	9.7	7.8	5.9	9.6	8.8
Rolling and drawing of copper and copper alloys.....		3.7	6.0	2.8	5.3	3.2	7.7
Aluminum and magnesium products.....		7.2	8.8	5.1	6.3	6.4	10.6
Nonferrous-metal foundries, except aluminum and magnesium.....		5.7	6.1	3.8	5.3	4.1	4.5
Chemicals and allied products.....		4.8	7.0	3.5	6.0	4.2	7.4
Industrial chemicals, except explosives.....		3.7	5.0	2.8	3.9	3.4	4.5
Explosives.....		6.3	8.7	4.8	7.7	6.9	12.2
Small-arms ammunition.....		7.0	8.1	5.2	6.9	4.9	7.3

<sup>1</sup> These figures are presented to show comparative turnover rates and should not be used to estimate employment.

<sup>2</sup> These figures are based on a slightly smaller sample than that for all employees, as some firms do not report separate data for women.

# Building Operations

## Building Construction Started in Urban Areas, May 1945

THERE was a 12-percent gain during May 1945 in the value of building construction started in urban areas of the United States. Total valuations for the month approximated 133 million dollars, as compared with 119 million dollars in April. The entire increase for May occurred in non-Federally financed work, which rose 18 percent; Federal contract awards, on the other hand, declined slightly.

New residential building, over nine-tenths of which was privately financed, gained 16 percent during May, and new nonresidential construction increased even more—25 percent. Additions, alterations, and repair work, however, declined 7 percent.

TABLE 1.—Summary of Building Construction Started in All Urban Areas, May 1945

Class of construction	Number of buildings			Value		
	May 1945	Percent of change from—		May 1945 (in thousands of dollars)	Percent of change from—	
		April 1945	May 1944		April 1945	May 1944
All building construction.....	68,318	+3.8	+1.3	133,476	+12.4	+24.4
New residential.....	11,424	+6.2	+27.2	46,657	+16.3	+37.6
New nonresidential.....	10,092	+1.2	+23.2	52,494	+25.2	+13.7
Additions, alterations, and repairs.....	46,802	+3.8	-7.0	34,325	-6.5	+26.1

The slight decline in the number of new family dwelling units started during the month was caused entirely by a sharp reduction in Federal residential construction. Federal contracts were let for only 1,283 units in May as compared with 3,075 in April. Privately financed units, on the other hand, increased from 9,502 to 11,207. The total for the month was 12,490, as compared with 12,577 in April.

TABLE 2.—Number and Value of New Dwelling Units Started in All Urban Areas, by Source of Funds and Type of Dwelling, May 1945

Source of funds and type of dwelling	Number of dwelling units			Value		
	May 1945	Percent of change from—		May 1945 (in thousands of dollars)	Percent of change from—	
		April 1945	May 1944		April 1945	May 1944
All dwellings.....	12,490	-0.7	+13.9	46,312	+16.1	+38.8
Privately financed.....	11,207	+17.9	+15.0	42,919	+31.6	+44.1
1-family.....	9,503	+35.1	+36.1	37,582	+46.5	+72.4
2-family <sup>1</sup> .....	933	+8.9	-2.4	3,148	+23.6	-1
Multifamily <sup>2</sup> .....	771	-51.9	-57.3	2,189	-50.4	-54.8
Federally financed.....	1,283	-58.3	+4.8	3,393	-53.5	-5.4

<sup>1</sup> Includes 1- and 2-family dwellings with stores.

<sup>2</sup> Includes multifamily dwellings with stores.

### Comparison of May 1945 and May 1944

The dollar volume of building construction begun this month was almost one-fourth greater than the total of 107 million dollars reported for May 1944. All classes of building construction shared in the gain for the year, but only because non-Federal work rose 40 percent, from 71 million dollars to 99 million dollars. Federal construction dropped 5 percent, reflecting the beginning of the curtailment of war motivated building programs brought about in part by the cessation of hostilities in Europe.

### Comparison of First 5 Months of 1944 and 1945

Valuations of all construction work started in urban areas during the first 5 months of 1945 totaled 512 million dollars—15 percent above the aggregate reported for the corresponding months in 1944. The volume of new nonresidential building and of additions, alterations, and repair work increased considerably, 26 and 28 percent, respectively; however, new residential construction experienced a 7-percent drop for the 5-month period, in spite of the current upward trend.

TABLE 3.—Value of Building Construction Started in All Urban Areas, by Class of Construction, First 5 Months of 1944 and 1945

Class of construction	Value (in thousands of dollars) of—					
	Total construction			Federal construction		
	First 5 months of—		Per- cent of change	First 5 months of—		Per- cent of change
	1945	1944		1945	1944	
All construction.....	512, 011	447, 284	+14. 5	160, 090	145, 453	+10. 1
New residential.....	149, 116	160, 920	—7. 3	15, 154	23, 385	—35. 2
New nonresidential.....	215, 981	171, 492	+25. 9	130, 404	116, 221	+12. 2
Additions, alterations, and repairs.....	146, 914	114, 872	+27. 9	14, 532	5, 847	+148. 5

TABLE 4.—Number and Value of New Dwelling Units Started in All Urban Areas, by Source of Funds and Type of Dwelling, First 5 Months of 1944 and 1945

Source of funds and type of dwelling	Number of dwelling units			Value (in thousands of dollars)		
	First 5 months of—		Per- cent of change	First 5 months of—		Per- cent of change
	1945	1944		1945	1944	
All dwellings.....	44, 320	52, 984	-16. 4	146, 750	159, 344	-7. 9
Privately financed.....	39, 050	43, 373	-10. 0	132, 759	136, 924	-3. 0
1-family.....	31, 310	32, 678	-4. 2	109, 942	103, 662	+6. 1
2-family <sup>1</sup> .....	3, 277	4, 510	-27. 3	9, 776	15, 271	-36. 0
Multifamily <sup>2</sup> .....	4, 463	6, 185	-27. 8	13, 041	17, 991	-27. 5
Federal.....	5, 270	9, 611	-45. 2	13, 991	22, 420	-37. 6

<sup>1</sup> Includes 1- and 2-family dwellings with stores

<sup>2</sup> Includes multifamily dwellings with stores.

*Construction from Public Funds, May 1945*

The value of contracts awarded and force-account work started during May and April 1945 and May 1944 on all construction projects, excluding shipbuilding, financed wholly or partially from Federal funds and reported to the Bureau of Labor Statistics, is shown in table 5. This table includes construction both inside and outside the corporate limits of cities in urban areas of the United States.

TABLE 5.—*Value of Contracts Awarded and Force-Account Work Started on Construction Projects Financed from Federal Funds, May 1945*

Source of funds	Value (in thousands of dollars) of contracts awarded and force-account work started		
	May 1945 <sup>1</sup>	April 1945 <sup>2</sup>	May 1944 <sup>3</sup>
All Federal sources.....	78,964	63,293	114,540
War public works.....	1,979	2,471	4,183
Regular Federal appropriations <sup>3</sup> .....	72,574	50,483	103,377
Federal Public Housing Authority.....	4,411	10,339	6,980

<sup>1</sup> Preliminary; subject to revision.

<sup>2</sup> Revised.

<sup>3</sup> Excludes the following amounts (in thousands) for ship construction: May 1945, \$11,110; April 1945, \$285,623; May 1944, \$125,717.

*Coverage and Method*

Figures on building construction in this report cover the entire urban area of the United States which by Census definition includes all incorporated places with a 1940 population of 2,500 or more and, by special rule, a small number of unincorporated civil divisions. Valuation figures, the basis for statements concerning value, are derived from estimates of construction cost made by prospective private builders when applying for permits to build, and the value of contracts awarded by Federal and State governments. No land costs are included. Unless otherwise indicated, only building construction within the corporate limits of cities in urban areas is included in the tabulations.

Reports of building permits which were received in May 1945 for cities containing between 80 and 85 percent of the urban population of the country provide the basis for estimating the total number of buildings and dwelling units and the valuation of private urban building construction. Similar data for Federally financed urban building construction are compiled directly from notifications of construction contracts awarded, as furnished by Federal agencies.

The contracts awarded and force-account work started on Federally financed building construction inside the corporate limits of cities in urban areas were valued at \$34,773,000 in May 1945, \$35,196,000 in April 1945, and \$36,670,000 in May 1944.

# Trend of Employment, Earnings, and Hours

## Summary of Reports for May 1945

TOTAL employment in nonagricultural establishments was 37,654,000 in May 1945, a decline of 150,000 since April and of slightly more than a million since May 1944. Over the year, there was a net increase in the armed forces of close to a million.

The employment decline, both over the month and over the year, was brought about by decreased employment in only two of the seven major industry divisions—manufacturing and mining. Although manufacturing accounted for the largest part of the over-all decline, the decreases in mining were significant.

Total mining employment was 726,000—100,000 less than a year ago and 35,000 less than in April. The decline reflects the almost complete shut-down of anthracite mines from May 1 to May 19, pending contract negotiations. The decrease in anthracite mining was offset somewhat by the reopening of bituminous-coal mines whose contracts had been approved at the end of April.

### Industrial and Business Employment

Manufacturing employment declined by 236,000 between April and May. While both the munitions and nonmunitions industries were involved, the major share of the decline—80 percent—was in the munitions group. Among the major munitions groups, declines of more than 10,000 were reported by the transportation equipment, machinery, iron and steel, automobile, and electrical machinery groups. In each case, the completion and cancellation of war contracts accounted for the decreases.

For the seventeenth consecutive month, the largest decline was reported by the transportation equipment group in which 1,772,000 were employed in May 1945, as compared with a peak of 2,626,000 in November 1943. While cut-backs in aircraft, aircraft engines, tanks, and shipbuilding contributed to this result, shipbuilding decreases alone accounted for two-thirds of the over-all decline.

Among the nonmunitions group, only the textile and apparel groups reported decreases of more than 10,000. To a large extent, these decreases were seasonal. The only increase reported between April and May was in the lumber group and, while small, it did indicate the seasonal reopening of logging operations.

TABLE 1.—*Estimated Number of Production Workers and Indexes of Production Worker Employment in Manufacturing Industries, by Major Industry Group*<sup>1</sup>

Industry group	Estimated number of production workers (in thousands)				Production-worker indexes (1939=100)	
	May 1945 <sup>2</sup>	April 1945	March 1945	May 1944	May 1945 <sup>2</sup>	April 1945
All manufacturing.....	12,442	12,678	12,940	13,652	151.9	154.8
Durable goods.....	7,287	7,471	7,661	8,315	201.8	206.9
Nondurable goods.....	5,155	5,207	5,279	5,337	112.5	113.7
Iron and steel and their products.....	1,608	1,631	1,658	1,669	162.2	164.5
Electrical machinery.....	671	682	693	747	258.9	263.3
Machinery, except electrical.....	1,104	1,130	1,152	1,211	208.9	213.8
Transportation equipment, except automobiles.....	1,772	1,874	1,970	2,401	116.4	1,180.9
Automobiles.....	643	659	668	710	159.9	163.7
Nonferrous metals and their products.....	400	404	407	426	174.6	176.3
Lumber and timber basic products.....	440	438	448	474	104.6	104.3
Furniture and finished lumber products.....	329	331	338	342	100.2	101.0
Stone, clay, and glass products.....	320	322	327	335	109.2	109.7
Textile-mill products and other fiber manufactures.....	1,035	1,046	1,067	1,110	90.5	91.4
Apparel and other finished textile products.....	801	819	836	862	101.5	103.7
Leather and leather products.....	303	305	309	312	87.3	87.9
Food.....	967	975	979	1,005	113.2	114.1
Tobacco manufactures.....	80	81	82	82	85.2	86.7
Paper and allied products.....	299	301	307	311	112.6	113.6
Printing, publishing, and allied industries.....	326	326	329	329	99.4	99.4
Chemicals and allied products.....	627	633	639	592	217.4	219.8
Products of petroleum and coal.....	133	133	134	130	126.0	126.0
Rubber products.....	189	192	197	195	156.4	159.1
Miscellaneous industries.....	395	396	400	409	161.4	161.8

<sup>1</sup> The estimates and indexes presented in this table have been adjusted to levels indicated by final 1942 and preliminary 1943 data made available by the Bureau of Employment Security of the Federal Security Agency. The term "production worker" has been substituted for the term "wage earner" which has been used in our previous releases. This conforms with the terminology and standard definitions of classes of workers in manufacturing industries formulated by the Division of Statistical Standards of the U. S. Bureau of the Budget. The use of "production worker" in place of "wage earner" has no appreciable effect on the employment estimates and indexes since there is very little difference in the definitions.

<sup>2</sup> Preliminary.

### Public Employment

Employment of the War Department in continental United States dropped in April and May 1945 by 10,600 and 11,700, respectively. Nevertheless, employment outside continental United States continued to increase at the rate of approximately 35,000 a month, and brought the total for the Department to 1,734,000 in May. This was almost 275,000 higher than last year.

The Navy Department, on the other hand, whose employment has increased almost steadily since January 1939, both inside and outside continental United States, had decreased employment of 6,600 in May 1945—all of the decrease being within continental United States. Employees, mainly those at the Cavite Navy Yard in the Philippines, who had been held prisoners of war by the Japanese since early 1942, were liberated in February 1945, and account for a 10,000 decline in Navy Department employment outside continental United States in March 1945, following their return to the States on furlough. In May 1945 the Navy had 754,000 civilian employees, or 23,000 more than a year ago.

War agencies other than the War and Navy Departments have shown little change in employment level during the past 6 months, but showed a 5,000 decline over the past 12-month period.

Employment in other agencies increased 12,400 during May 1945. The National Labor Relations Board, which usually has a staff of somewhat fewer than 800 persons, added 2,700 temporary workers to conduct elections in the anthracite and bituminous-coal mining areas. The Commerce Department added 3,600 employees for its agricultural census, the Post Office Department added 2,900, Agriculture 1,900, and the Veterans Administration 1,700.

In all branches of the Federal Government, including Government corporations, employment was 3,638,000 in May 1945, as compared with 3,278,000 in May 1944. War-agency gains amounted to 293,000, and those of other agencies, to 67,000. The number of civilians employed outside continental United States was 302,000 higher than a year ago, and the number inside the continental limits, 58,000 higher.

*Source of data.*—Data for the Federal executive service are reported through the Civil Service Commission, whereas data for the legislative and judicial services and Government corporations are reported to the Bureau of Labor Statistics. Force-account employment is also included in construction employment (table 5), and navy-yard employment is also included in employment on shipbuilding and repair projects (table 4). Data for pay rolls are now being revised, and the revised series will be available shortly.

TABLE 2.—*Employment in Regular Federal Services and in Government Corporations in Selected Months*

Year and month	Total	Executive <sup>1</sup>	Legislative	Judicial	Government corporations <sup>2</sup>
May 1939.....	935,717	903,549	5,315	2,123	24,730
May 1940.....	1,014,886	980,236	5,882	2,480	26,288
May 1941.....	1,341,098	1,303,037	6,015	2,505	29,541
May 1942.....	2,122,660	2,081,715	6,457	2,650	31,838
May 1943.....	3,226,607	3,182,814	6,116	2,722	34,955
May 1944.....	3,278,453	3,233,367	6,123	2,676	36,287
January 1945.....	3,449,802	3,406,672	6,160	2,638	34,332
February 1945 <sup>3</sup> .....	3,516,640	3,473,254	6,561	2,643	34,182
March 1945 <sup>3</sup> .....	3,574,833	3,531,808	6,281	2,632	34,112
April 1945 <sup>3</sup> .....	3,613,169	3,570,080	6,346	2,626	34,117
May 1945 <sup>4</sup> .....	3,638,147	3,595,249	6,361	2,617	33,920

<sup>1</sup> Includes employees in United States navy yards who are also included under shipbuilding (table 4) and employees on force-account construction who are also included under construction projects (table 5). Includes employees stationed outside continental United States. Beginning March 1945, data exclude 10,324 employees of the Navy Department who had been held prisoners of war by the enemy since about January 1942.

<sup>2</sup> Data are for employees of the Panama Railroad Co., the Federal Reserve Banks, and banks of the Farm Credit Administration, who are paid out of operations revenues and not out of Federal appropriations. Data for other Government corporations are included under the executive service.

<sup>3</sup> Revised.

<sup>4</sup> Preliminary.

TABLE 3.—*Employment in the Executive Branch of the Federal Government, by War and Other Agencies, in Selected Months*<sup>1</sup>

Year and month	Total	War agencies <sup>2</sup>			Other agencies		
		All areas	Continental United States	Outside continental United States <sup>3</sup>	All areas	Continental United States	Outside continental United States <sup>3</sup>
May 1939.....	903,549	194,781	166,334	28,447	708,768	699,845	8,923
May 1940.....	980,236	250,926	207,541	43,385	729,310	717,877	11,433
May 1941.....	1,303,037	524,923	453,602	71,321	778,114	765,061	13,053
May 1942.....	2,081,715	1,232,694	1,068,571	164,123	849,021	834,917	14,104
May 1943.....	3,182,814	2,372,103	2,102,212	269,891	810,711	795,659	15,052
May 1944.....	3,233,367	2,410,155	2,045,695	364,460	823,212	807,717	15,495
January 1945.....	3,406,672	2,561,118	2,030,351	530,767	845,554	829,327	16,227
February 1945 <sup>4</sup> .....	3,473,254	2,625,509	2,057,409	568,100	847,745	831,432	16,313
March 1945 <sup>4</sup> .....	3,531,808	2,661,320	2,064,778	596,542	870,488	854,090	16,398
April 1945 <sup>5</sup> .....	3,570,080	2,689,936	2,056,697	633,239	880,144	863,656	16,488
May 1945 <sup>6</sup> .....	3,595,249	2,702,723	2,038,624	664,099	892,526	876,011	16,515

<sup>1</sup> Includes employees in United States navy yards who are also included under shipbuilding (table 4) and employees on force-account construction who are also included under construction projects (table 5).

<sup>2</sup> Covers War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and the emergency war agencies.

<sup>3</sup> Includes Alaska and the Panama Canal Zone.

<sup>4</sup> Beginning March 1945 data exclude 10,324 employees of the Navy Department who had been held prisoners of war by the enemy since about January 1942.

<sup>5</sup> Revised.

<sup>6</sup> Preliminary.

### *Employment on Shipbuilding and Repair*

The declining importance of the Federal shipbuilding and repair program is reflected in the sharp employment drop of 77,600 in May 1945. This exceeded slightly the drop of 77,000 in April. Together, the April and May 1945 declines represent one-third of the entire curtailment in the industry's employment since the peak in December 1943.

Although the navy yards have had declining employment levels during the past year, they have not been affected to as great an extent, proportionately, as the private yards. Between May 1944 and May 1945, employment in navy yards declined only 4 percent, as compared with 32 percent in the private yards.

Viewed geographically, the Inland Region suffered the greatest employment drop (61 percent) during the past year, with the Great Lakes Region next (43 percent) and the Gulf Region third (36 percent). Employment in the North and South Atlantic and Pacific regions in May 1945 was not quite four-fifths of the respective May 1944 levels.

The pay-roll declines during May 1945 and during the preceding year paralleled rather closely the employment declines for the industry as a whole.

Employment on the Federal shipbuilding and repair program was 1,189,400 in May 1945, and pay rolls \$341,973,000.

Data on employment and pay rolls on shipbuilding and repair projects are received monthly by the Bureau of Labor Statistics directly from all shipyards within continental United States. Employees in the navy yards are also included in data for the Federal executive service (tables 2 and 3).

TABLE 4.—Total Employment and Pay Rolls in United States Navy Yards and Private Shipyards Within Continental United States, by Shipbuilding Region, May 1945

Shipbuilding region	Employment (in thousands)			Pay rolls (thousands of dollars)		
	May 1945 <sup>1</sup>	April 1945	May 1944	May 1945 <sup>1</sup>	April 1945	May 1944
All regions.....	1,189.4	1,267.0	1,612.2	341,973	371,515	464,316
U. S. navy yards <sup>2</sup> .....	315.8	322.0	330.3	93,571	96,528	93,852
Private shipyards.....	873.6	945.0	1,281.9	248,402	274,987	370,464
North Atlantic.....	460.9	486.1	587.1	145,665	149,392	(3)
South Atlantic.....	109.3	114.8	143.6	28,263	30,867	(3)
Gulf.....	141.2	152.5	221.4	37,151	40,198	(3)
Pacific.....	416.5	439.5	532.1	113,499	127,679	(3)
Great Lakes.....	36.9	42.1	64.7	9,784	13,730	(3)
Inland.....	24.6	32.0	63.3	7,611	9,649	(3)

<sup>1</sup> Preliminary.<sup>2</sup> Includes all navy yards constructing or repairing ships, including the Curtis Bay (Md.) Coast Guard yard. Data are also included in the Federal executive service (tables 2 and 3).<sup>3</sup> Break-down not available.

### Construction Employment

The expansion of 6,700, which brought site employment on Federally financed construction projects to a total of 225,000 in May 1945, occurred for the most part on nonresidential building construction. Expansion, which took place in the earlier months of 1945, likewise was in nonresidential building construction. Employment on almost all other types of Federal projects in May 1945 was only a fraction of the number of workers employed in May 1944.

With the gradual relaxation of Government restrictions on private construction, the trend of site employment on non-Federal projects has been upward since January 1945. The expansion has been especially marked for nonresidential building construction. Construction of streets and highways by State, county, and municipal governments did not share in this general expansion.

Site employment at secret Federal projects increased slightly in May 1945, but most of the 10,500 increase in employment away from the construction site was in the office and shop employee groups.

*Source of data.*—For construction projects financed wholly or partially from Federal funds, the Bureau of Labor Statistics receives monthly reports on employment and pay rolls at the construction site, directly from the contractors or from the Federal agency sponsoring the project. Force-account employees hired directly by the Federal Government are also included in tables 2 and 3 under Federal executive service.

Estimates of employment on non-Federal construction projects (except State roads) are obtained by converting the value of work started (compiled from reports on building permits issued, priorities granted, and from certain special reports) into monthly expenditures and employment by means of factors which have been developed from special studies and adjusted to current conditions. For State roads projects, data represent estimates of the Public Roads Administration.

TABLE 5.—*Estimated Employment and Pay Rolls on Construction Within Continental United States, May 1945*

Type of project	Employment (in thousands)			Pay rolls (in thou- sands of dollars)		
	May 1945 <sup>1</sup>	April 1945	May 1944	May 1945 <sup>1</sup>	April 1945	May 1944
New construction, total <sup>2</sup> .....	886.9	808.7	760.2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
At the construction site.....	753.3	685.6	606.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Federal projects <sup>4</sup> .....	225.0	218.3	241.8	53,517	49,967	48,677
Airports.....	6.1	5.5	21.2	1,159	1,036	3,465
Buildings.....	177.3	170.4	158.5	43,474	40,612	33,096
Residential.....	10.8	11.1	28.4	2,455	2,430	6,052
Nonresidential <sup>5</sup> .....	166.5	159.3	130.1	41,019	38,182	27,044
Electrification.....	.6	.5	.6	109	97	111
Reclamation.....	6.4	6.7	14.5	1,601	1,508	3,263
River, harbor, and flood control.....	11.7	13.9	19.4	2,384	2,600	3,762
Streets and highways.....	7.6	7.8	15.2	1,413	1,430	2,753
Water and sewer systems.....	3.3	3.4	5.7	575	587	883
Miscellaneous.....	12.0	10.1	6.7	2,802	2,097	1,344
Non-Federal projects.....	528.3	457.4	364.8	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Buildings.....	310.2	264.1	191.7	71,656	62,502	44,283
Residential.....	109.4	86.0	111.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Nonresidential.....	200.8	178.1	80.1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Farm dwellings and service buildings.....	73.4	67.7	46.2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Public utilities.....	106.9	102.7	90.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Streets and highways.....	22.0	18.7	22.9	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
State.....	9.0	7.5	10.7	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
County and municipal.....	13.0	11.2	12.2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Miscellaneous.....	15.8	14.2	13.4	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Other <sup>6</sup> .....	133.6	123.1	162.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Maintenance of State roads <sup>7</sup> .....	82.9	82.0	85.0	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> Preliminary.<sup>2</sup> Data are for all construction workers (contract and force-account) engaged on new construction, additions and alterations, and on repair work of the type usually covered by building permits. (Force-account employees are workers hired directly by the owner and utilized as a separate work force to perform construction work of the types usually chargeable to capital account.) The construction figure included in the Bureau's nonagricultural employment series covers only employees of construction contractors and on Federal force-account and excludes force-account workers of State and local governments, public utilities, and private firms.<sup>3</sup> Data not available.<sup>4</sup> Includes the following force-account employees, hired directly by the Federal Government, and their pay rolls: May 1944, 26,983, \$5,606,808; April 1945, 19,556, \$3,695,141; May 1945, 18,684, \$3,743,899. These employees also are included under the Federal executive service.<sup>5</sup> Includes the following employees and pay rolls for Defense Plant Corporation (RFC) projects: May 1944, 47,548, \$11,817,167; April 1945, 14,253, \$3,558,559; May 1945, 15,199, \$3,414,437.<sup>6</sup> Includes central office force of construction contractors, shop employees of special trades contractors, such as bench sheet-metal workers, etc., and site employees engaged on projects which, for security reasons, cannot be shown above.<sup>7</sup> Data for other types of maintenance not available.

## Detailed Reports for Industrial and Business Employment, April 1945

### Nonagricultural Employment

ESTIMATES of employment in nonagricultural establishments are shown in table 1. The estimates are based on reports of employers to the Bureau of Labor Statistics, on unemployment-compensation data made available by the Bureau of Employment Security of the Federal Security Agency, and on information supplied by other Government agencies, such as the Interstate Commerce Commission, Civil Service Commission, Bureau of the Census, and the Bureau of Old-Age and Survivors Insurance. The estimates include all wage and salaried workers in nonagricultural establishments but exclude

military personnel, proprietors, self-employed persons, and domestic servants.

Estimates of employees in nonagricultural establishments, by States, are published each month in a detailed report on employment and pay rolls.

TABLE 1.—*Estimated Number of Employees in Nonagricultural Establishments, by Industry Division*

Industry division	Estimated number of employees (in thousands)			
	April 1945	March 1945	February 1945	April 1944
Total estimated employment <sup>1</sup> .....	37,804	38,062	37,968	38,689
Manufacturing <sup>2</sup> .....	15,102	15,368	15,517	16,309
Mining.....	761	796	798	844
Contract construction and Federal force-account construction.....	690	636	599	683
Transportation and public utilities.....	3,795	3,788	3,771	3,744
Trade.....	6,995	7,084	6,985	6,968
Finance, service, and miscellaneous.....	4,458	4,394	4,360	4,236
Federal, State, and local Government, excluding Federal force-account construction.....	6,003	5,996	5,938	5,905

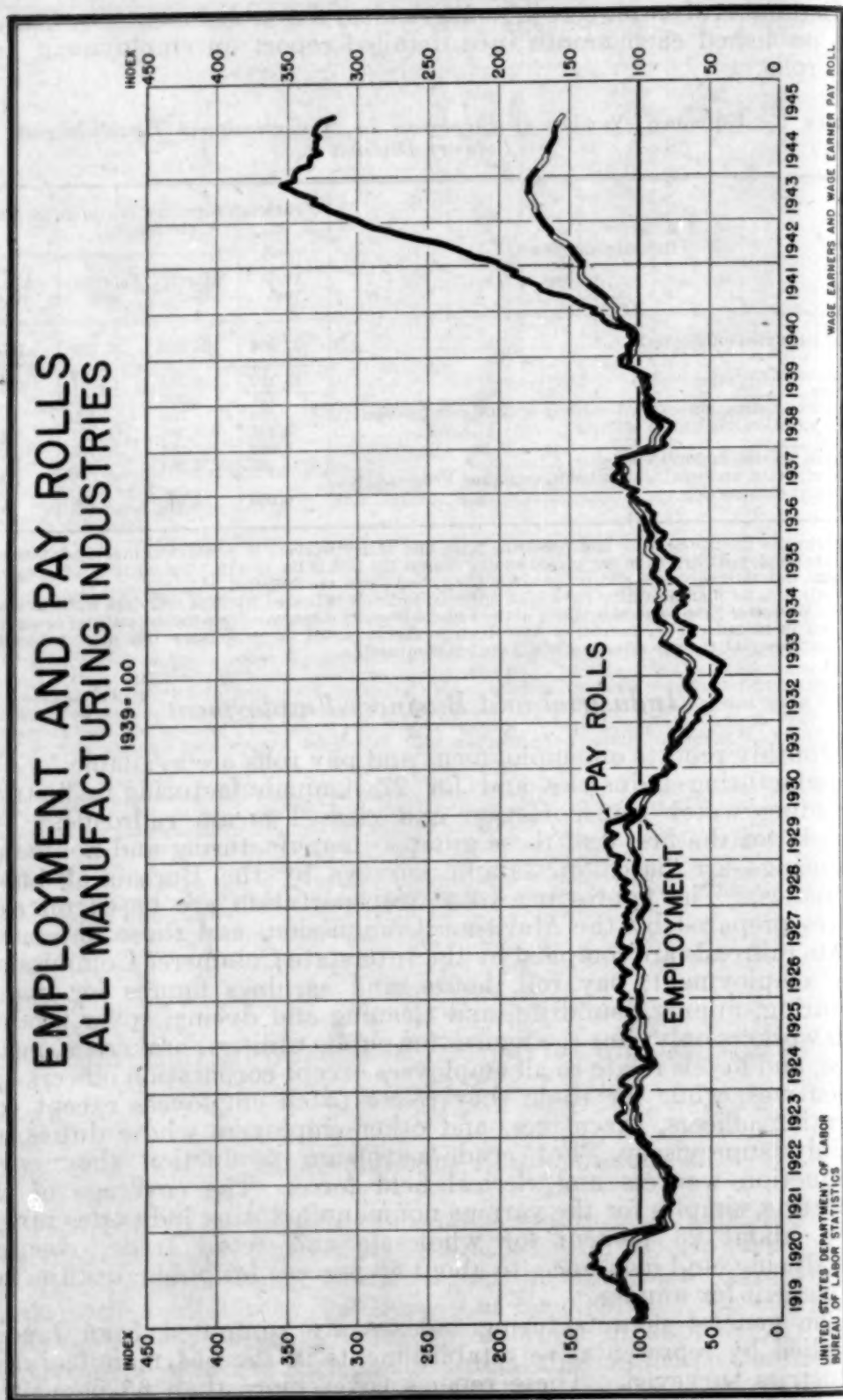
<sup>1</sup> Estimates include all full- and part-time wage and salary workers in nonagricultural establishments who are employed during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

<sup>2</sup> Estimates for manufacturing have been adjusted to levels indicated by final 1942 data made available by the Bureau of Employment Security of the Federal Security Agency. Since the estimates of production workers in manufacturing industries have been further adjusted to preliminary 1943 data, subsequent to December 1942, the two sets of estimates are not comparable.

### *Industrial and Business Employment*

Monthly reports on employment and pay rolls are available for 154 manufacturing industries and for 27 nonmanufacturing industries, including water transportation and class I steam railroads. The reports for the first 2 of these groups—manufacturing and nonmanufacturing—are based on sample surveys by the Bureau of Labor Statistics. The figures on water transportation are based on estimates prepared by the Maritime Commission, and those on class I steam railroads are compiled by the Interstate Commerce Commission. The employment, pay roll, hours, and earnings figures for manufacturing, mining, laundries, and cleaning and dyeing, cover production workers only; but the figures for public utilities, brokerage, insurance, and hotels relate to all employees except corporation officers and executives, while for trade they relate to all employees except corporation officers, executives, and other employees whose duties are mainly supervisory. For crude-petroleum production they cover production workers and clerical field force. The coverage of the reporting samples for the various nonmanufacturing industries ranges from about 25 percent for wholesale and retail trade, cleaning and dyeing, and insurance, to about 80 percent for public utilities and 90 percent for mining.

The general manufacturing indexes are computed from reports supplied by representative establishments in the 154 manufacturing industries surveyed. These reports cover more than 65 percent of the total production workers in all manufacturing industries of the country and about 80 percent of the production workers in the 154 industries covered.



Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and the amount of pay rolls for the period ending nearest the 15th of the month.

## INDEXES OF EMPLOYMENT AND PAY ROLLS

Employment and pay-roll indexes, for both manufacturing and nonmanufacturing industries, for February, March, and April 1945, and for April 1944, are presented in tables 3 and 5.

The figures relating to all manufacturing industries combined, to the durable- and nondurable-goods divisions, and to the major industry groups, have been adjusted to levels indicated by final data for 1942 and preliminary data for 1943 made available by the Bureau of Employment Security of the Federal Security Agency. The Bureau of Employment Security data referred to are (a) employment totals reported by employers under State unemployment-compensation programs and (b) estimates of the number of employees not reported under the programs of some of these States, which do not cover small establishments. The latter estimates were obtained from tabulations prepared by the Bureau of Old Age and Survivors Insurance, which obtains reports from all employers, regardless of size of establishment.

Not all industries in each major industry group are represented in the tables since minor industries are not canvassed by the Bureau. Furthermore, no attempt has been made to allocate among the separate industries the adjustments to unemployment-compensation data. Hence, the estimates for individual industries within a group do not in general add to the total for that group.

TABLE 2.—*Estimated Number of Production Workers in Manufacturing Industries*<sup>1</sup>

Industry	Estimated number of production workers (in thousands)			
	April 1945	March 1945	February 1945	April 1944
All manufacturing.....	12,678	12,940	13,081	13,814
Durable goods.....	7,471	7,661	7,770	8,421
Nondurable goods.....	5,207	5,279	5,311	5,393
<i>Durable goods</i>				
Iron and steel and their products.....	1,631	1,658	1,666	1,680
Blast furnaces, steel works, and rolling mills.....	475.8	478.5	478.4	485.5
Gray-iron and semisteel castings.....	72.5	74.6	75.3	74.6
Malleable-iron castings.....	24.1	25.4	26.0	25.0
Steel castings.....	70.9	71.8	72.4	76.9
Cast-iron pipe and fittings.....	16.1	15.7	15.7	15.0
Tin cans and other tinware.....	41.7	41.9	41.1	36.2
Wire drawn from purchased rods.....	32.0	32.7	32.6	33.7
Wirework.....	33.9	34.7	35.1	33.9
Cutlery and edge tools.....	23.9	24.4	24.2	22.6
Tools (except edge tools, machine tools, files, and saws).....	26.8	27.5	27.4	28.1
Hardware.....	46.0	46.8	46.7	46.6
Plumbers' supplies.....	22.8	23.2	22.7	23.4
Stoves, oil burners, and heating equipment, not elsewhere classified.....	62.0	63.6	64.0	61.2
Steam and hot-water heating apparatus and steam fittings.....	54.3	55.2	55.6	56.9
Stamped and enameled ware and galvanizing.....	86.0	86.9	87.9	89.1
Fabricated structural and ornamental metalwork.....	67.5	70.0	73.2	75.4
Metal doors, sash, frames, molding, and trim.....	10.3	10.7	10.9	13.0
Bolts, nuts, washers, and rivets.....	23.6	23.9	24.0	27.9
Forgings, iron and steel.....	34.4	35.4	35.7	38.4
Wrought pipe, welded and heavy riveted.....	24.1	24.4	23.6	26.3
Screw-machine products and wood screws.....	42.4	43.0	43.0	46.8
Steel barrels, kegs, and drums <sup>2</sup> .....	8.4	8.4	8.3	7.1
Firearms.....	29.8	30.7	32.3	53.3

See footnotes at end of table.

TABLE 2.—Estimated Number of Production Workers in Manufacturing Industries 1—  
Continued

Industry	Estimated number of production workers (in thousands)			
	April 1945	March 1945	February 1945	April 1944
<i>Durable goods—Continued</i>				
Electrical machinery.....	682	693	696	755
Electrical equipment.....	419.7	426.4	429.0	459.1
Radios and phonographs.....	114.5	116.7	117.5	130.4
Communication equipment.....	103.7	105.0	104.5	116.8
Machinery, except electrical.....	1,130	1,152	1,165	1,227
Machinery and machine-shop products.....	441.4	449.9	454.2	475.6
Engines and turbines.....	65.2	66.7	67.7	71.4
Tractors <sup>2</sup> .....	55.6	57.2	58.0	59.9
Agricultural machinery, excluding tractors.....	42.7	43.9	44.8	45.6
Machine tools.....	73.6	74.6	74.8	80.4
Machine-tool accessories.....	63.9	64.4	65.2	71.0
Textile machinery.....	25.9	26.4	26.4	27.8
Pumps and pumping equipment.....	68.9	71.5	72.6	82.4
Typewriters.....	13.0	13.1	13.0	11.5
Cash registers, adding and calculating machines.....	29.2	29.8	30.4	33.4
Washing machines, wringers and driers, domestic.....	12.8	12.8	12.6	13.7
Sewing machines, domestic and industrial.....	10.8	11.1	11.2	9.3
Refrigerators and refrigeration equipment.....	49.9	51.1	52.4	52.9
Transportation equipment, except automobiles.....	1,874	1,970	2,042	2,442
Locomotives.....	33.5	34.0	34.1	36.3
Cars, electric- and steam-railroad.....	57.9	58.6	59.2	59.1
Aircraft and parts, excluding aircraft engines <sup>3</sup> .....	619.1	637.6	646.4	763.8
Aircraft engines <sup>3</sup> .....	203.5	210.6	213.7	259.0
Shipbuilding and boatbuilding.....	853.2	917.1	973.0	1,192.7
Motorcycles, bicycles, and parts.....	9.6	9.5	9.6	9.1
Automobiles.....	659	668	680	724
Nonferrous metals and their products.....	404	407	403	432
Smelting and refining, primary, of nonferrous metals.....	39.2	39.5	39.7	52.2
Alloying and rolling and drawing of nonferrous metals except aluminum.....	71.7	72.6	71.9	71.8
Clocks and watches.....	26.0	26.3	26.2	24.8
Jewelry (precious metals) and jewelers' findings.....	13.2	13.2	13.2	14.3
Silverware and plated ware.....	10.9	11.0	10.9	10.5
Lighting equipment.....	26.3	26.2	26.2	25.0
Aluminum manufactures.....	70.6	70.5	68.8	78.4
Sheet-metal work, not elsewhere classified.....	31.4	32.0	32.2	31.8
Lumber and timber basic products.....	438	448	450	475
Sawmills and logging camps.....	213.7	218.4	218.9	231.5
Planing and plywood mills.....	68.3	69.8	70.6	74.3
Furniture and finished lumber products.....	331	338	341	347
Mattresses and bedsprings.....	17.2	17.6	17.8	15.9
Furniture.....	149.2	152.5	154.1	159.4
Wooden boxes, other than cigar.....	26.6	27.1	27.2	28.1
Caskets and other morticians' goods.....	12.1	12.2	12.3	12.4
Wood preserving.....	9.9	10.0	10.2	9.8
Wood, turned and shaped.....	20.9	21.4	21.5	21.7
Stone, clay, and glass products.....	322	327	327	339
Glass and glassware.....	87.0	88.3	87.6	92.6
Glass products made from purchased glass.....	10.8	11.1	11.0	10.4
Cement.....	16.2	16.1	16.1	17.2
Brick, tile, and terra cotta.....	40.5	40.9	41.2	43.2
Pottery and related products.....	38.3	38.9	39.3	41.6
Gypsum.....	4.0	4.1	4.0	4.3
Wallboard, plaster (except gypsum), and mineral wool.....	9.3	9.4	9.6	9.3
Lime.....	7.6	7.7	7.7	8.4
Marble, granite, slate, and other products.....	13.1	13.8	14.0	12.4
Abrasives.....	21.4	21.6	21.5	21.7
Asbestos products.....	19.7	20.1	20.0	21.2

See footnotes at end of table.

TABLE 2.—Estimated Number of Production Workers in Manufacturing Industries<sup>1</sup>—Continued

Industry	Estimated number of production workers (in thousands)			
	April 1945	March 1945	February 1945	April 1944
<i>Nondurable goods</i>				
Textile-mill products and other fiber manufactures.....	1,046	1,067	1,075	1,128
Cotton manufactures, except smallwares.....	415.9	424.2	428.5	445.3
Cotton smallwares.....	13.5	13.5	13.3	13.8
Silk and rayon goods.....	86.3	88.0	88.8	91.4
Woolen and worsted manufactures, except dyeing and finishing.....	142.1	145.2	146.0	155.0
Hosiery.....	97.0	98.6	99.6	107.2
Knitted cloth.....	10.2	10.3	10.2	11.0
Knitted outerwear and knitted gloves.....	27.9	28.6	28.7	30.4
Knitted underwear.....	33.4	34.1	34.3	36.7
Dyeing and finishing textiles, including woolen and worsted.....	57.6	58.8	59.0	63.0
Carpets and rugs, wool.....	19.6	20.0	20.1	20.4
Hats, fur-felt.....	9.1	9.3	9.3	9.5
Jute goods, except felts.....	3.2	3.2	3.2	3.3
Cordage and twine.....	14.6	14.9	15.0	16.1
Apparel and other finished textile products.....	819	836	838	879
Men's clothing, not elsewhere classified.....	198.0	201.4	202.3	214.2
Shirts, collars, and nightwear.....	48.5	49.4	49.4	54.1
Underwear and neckwear, men's.....	12.0	12.1	12.0	12.5
Work shirts.....	14.4	14.3	14.3	15.5
Women's clothing, not elsewhere classified.....	206.9	212.7	213.6	221.4
Corsets and allied garments.....	14.1	14.4	14.6	15.3
Millinery.....	19.6	20.6	20.2	19.4
Handkerchiefs.....	2.5	2.6	2.6	3.1
Curtains, draperies, and bedspreads.....	10.6	10.3	10.2	12.8
Housefurnishings, other than curtains, etc.....	10.7	11.2	11.4	9.6
Textile bags.....	14.6	14.7	14.4	14.9
Leather and leather products.....	305	309	310	315
Leather.....	38.8	39.3	39.6	40.7
Boot and shoe cut stock and findings.....	15.9	16.1	16.0	16.4
Boots and shoes.....	170.6	172.3	172.6	175.2
Leather gloves and mittens.....	11.7	11.9	12.0	13.2
Trunks and suitcases.....	12.1	12.6	12.9	12.2
Food.....	975	979	997	1,002
Slaughtering and meat packing.....	129.2	136.2	144.9	156.2
Butter.....	23.4	22.6	21.6	22.7
Condensed and evaporated milk.....	14.9	13.9	13.5	13.6
Ice cream.....	15.1	14.0	13.5	14.6
Flour.....	28.4	29.0	29.6	27.9
Feeds, prepared.....	21.1	21.2	21.5	19.9
Cereal preparations.....	9.4	9.3	9.3	9.4
Baking.....	254.7	256.8	257.2	255.0
Sugar refining, cane.....	15.3	15.0	15.3	14.0
Sugar, beet.....	4.0	3.9	4.2	4.1
Confectionery.....	56.0	58.1	58.3	57.8
Beverages, nonalcoholic.....	26.4	25.7	25.5	26.9
Malt liquors.....	49.9	49.9	50.1	48.3
Canning and preserving.....	101.6	95.8	101.2	99.6
Tobacco manufactures.....	81	82	82	83
Cigarettes.....	34.4	34.8	35.2	33.6
Cigars.....	32.9	33.2	33.2	37.1
Tobacco (chewing and smoking) and snuff.....	8.6	8.7	8.7	7.5
Paper and allied products.....	301	307	310	314
Paper and pulp.....	143.8	146.1	147.5	145.9
Paper goods, other.....	43.8	44.8	44.9	47.4
Envelopes.....	9.3	9.4	9.5	9.8
Paper bags.....	12.6	12.9	13.1	13.6
Paper boxes.....	75.8	77.4	77.9	80.3
Printing, publishing, and allied industries.....	326	329	330	332
Newspapers and periodicals.....	108.8	109.3	108.8	110.3
Printing, book and job.....	131.4	132.4	133.9	132.6
Lithographing.....	24.0	24.5	24.3	25.0
Bookbinding.....	27.1	27.6	28.0	28.9

See footnotes at end of table.

TABLE 2.—*Estimated Number of Production Workers in Manufacturing Industries*<sup>1</sup>—  
Continued

Industry	Estimated number of production workers (in thousands)			
	April 1945	March 1945	February 1945	April 1944
<i>Nondurable goods—Continued</i>				
Chemicals and allied products.....	633	639	638	601
Paints, varnishes, and colors.....	28.9	29.4	29.5	29.8
Drugs, medicines, and insecticides.....	50.2	49.9	49.4	51.9
Perfumes and cosmetics.....	12.2	12.1	12.3	11.5
Soap.....	13.2	13.4	13.4	13.6
Rayon and allied products.....	53.1	54.6	54.7	52.0
Chemicals, not elsewhere classified.....	114.7	115.3	115.3	120.2
Explosives and safety fuses.....	98.5	98.7	97.9	68.3
Compressed and liquefied gases.....	6.0	5.9	6.0	6.0
Ammunition, small-arms.....	67.4	67.2	65.9	57.9
Fireworks.....	23.3	23.8	25.0	30.7
Cottonseed oil.....	14.5	16.3	18.5	15.4
Fertilizers.....	27.1	26.9	25.1	26.2
Products of petroleum and coal.....	133	134	134	128
Petroleum refining.....	91.8	91.8	91.5	85.9
Coke and byproducts.....	21.8	22.0	22.1	22.9
Paving materials.....	1.6	1.5	1.5	1.5
Roofing materials.....	9.5	9.5	9.5	9.7
Rubber products.....	192	197	198	197
Rubber tires and inner tubes.....	93.2	95.7	96.4	91.6
Rubber boots and shoes.....	16.9	17.4	17.5	20.1
Rubber goods, other.....	71.3	72.6	72.5	74.0
Miscellaneous industries.....	396	400	399	414
Instruments (professional and scientific) and fire-control equipment.....	59.7	59.9	59.6	63.7
Photographic apparatus.....	27.4	28.0	28.0	29.2
Optical instruments and ophthalmic goods.....	23.3	23.6	23.5	25.5
Pianos, organs, and parts.....	7.5	7.4	7.3	8.5
Games, toys, and dolls.....	15.6	15.9	16.3	15.7
Buttons.....	9.6	9.7	9.6	10.1
Fire extinguishers.....	4.6	4.7	4.7	6.5

<sup>1</sup> Estimates for the major industry groups have been adjusted to levels indicated by final 1942 and preliminary 1943 data made available by the Bureau of Employment Security of the Federal Security Agency. Estimates for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data. For this reason, together with the fact that this Bureau has not prepared estimates for certain industries, the sum of the individual industry estimates will not agree with totals shown for the major industry groups. The term "production worker" has been substituted for the term "wage earner" which has been used in our previous reports. This conforms with the terminology and standard definitions of classes of workers in manufacturing industries formulated by the Division of Statistical Standards of the U. S. Bureau of the Budget. The use of "production worker" in place of "wage earner" has no appreciable effect on the employment estimates since there is very little difference in the definitions.

<sup>2</sup> Revisions have been made as follows in the data for earlier months:

  Steel barrels, kegs, and drums.—January 1945 production workers to 8.1.

  Tractors.—January 1945 production workers to 58.2.

<sup>3</sup> Comparable data from January 1939 are available upon request.

TABLE 3.—Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries<sup>1</sup>

Industry	Employment indexes (1939 average=100)				Pay-roll indexes (1939 average=100)			
	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1944	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1944
All manufacturing.....	154.8	158.0	159.7	168.6	317.2	325.5	329.0	335.0
Durable goods.....	206.9	212.2	215.2	233.2	430.8	444.0	451.1	474.8
Nondurable goods.....	113.7	115.2	115.9	117.7	206.1	209.7	209.6	198.2
<i>Durable goods</i>								
Iron and steel and their products.....	164.5	167.3	168.0	169.4	314.2	319.1	318.0	310.9
Blast furnaces, steel works, and rolling mills.....	122.5	123.2	123.1	125.0	229.6	229.1	223.6	221.2
Gray-iron and semisteel castings.....	124.0	127.7	128.8	127.7	257.7	269.4	267.5	246.7
Malleable-iron castings.....	133.9	140.8	144.0	138.4	283.4	298.7	305.8	271.5
Steel castings.....	235.5	238.7	240.5	255.7	451.2	457.7	453.5	463.1
Cast-iron pipe and fittings.....	97.6	94.8	94.9	91.0	193.4	190.1	196.8	173.6
Tin cans and other tinware.....	131.3	131.8	129.3	114.0	227.5	231.2	227.4	198.7
Wire drawn from purchased rods.....	145.6	148.6	148.6	153.6	252.8	257.5	255.7	249.1
Wirework.....	111.5	114.1	115.5	111.6	225.6	235.9	236.9	219.6
Cutlery and edge tools.....	155.1	158.1	157.0	146.3	323.9	332.4	333.3	304.3
Tools (except edge tools, machine tools, files, and saws).....	174.7	179.7	179.1	183.3	342.7	352.1	352.0	349.4
Hardware.....	128.9	131.4	131.0	130.8	275.0	280.7	277.7	266.0
Plumbers' supplies.....	92.5	94.2	92.1	94.8	177.4	180.4	176.6	170.4
Stoves, oil burners, and heating equipment, not elsewhere classified.....	134.4	137.8	138.8	132.7	264.6	269.7	273.9	248.3
Steam and hot-water heating apparatus and steam fittings.....	179.2	182.1	183.5	187.9	348.0	349.7	355.3	351.8
Stamped and enameled ware and galvanizing.....	154.8	156.4	158.2	160.4	323.0	331.4	338.1	312.7
Fabricated structural and ornamental metal-work.....	190.1	197.2	206.1	212.1	364.6	368.7	396.0	414.7
Metal doors, sash, frames, molding, and trim <sup>2</sup> .....	133.4	138.1	140.9	168.5	290.2	273.1	277.6	323.8
Bolts, nuts, washers, and rivets.....	165.3	166.8	167.5	195.1	334.6	344.8	335.3	372.4
Forgings, iron and steel.....	223.9	230.0	232.1	249.5	460.8	472.0	484.4	492.9
Wrought pipe, welded and heavy riveted.....	287.9	291.1	281.6	314.5	614.1	609.3	566.5	602.0
Screw-machine products and wood screws.....	250.3	253.9	253.8	276.6	501.4	515.3	514.6	529.6
Steel barrels, kegs, and drums <sup>3</sup> .....	138.2	138.9	137.2	116.3	295.1	268.8	274.8	225.0
Firearms.....	596.6	614.4	645.2	1065.0	1299.3	1404.6	1457.7	2504.1
Electrical machinery.....	263.3	267.5	268.6	291.5	494.8	504.7	505.0	513.2
Electrical equipment.....	232.2	235.9	237.3	254.0	440.8	452.5	451.9	456.4
Radios and phonographs.....	263.1	268.3	270.0	299.7	520.6	528.7	535.1	555.7
Communication equipment.....	322.8	327.0	325.4	363.6	559.6	556.7	555.5	565.6
Machinery, except electrical.....	213.8	218.0	220.4	232.2	407.0	419.2	424.6	434.4
Machinery and machine-shop products.....	218.2	222.3	224.5	235.1	409.8	419.8	423.7	429.2
Engines and turbines.....	349.3	357.7	362.9	382.6	732.4	769.3	791.8	802.9
Tractors <sup>4</sup> .....	177.8	183.0	185.3	191.4	278.4	287.5	292.0	297.9
Agricultural machinery, excluding tractors.....	153.4	157.7	161.0	164.0	312.5	324.6	328.3	333.4
Machine tools.....	200.9	203.8	204.3	219.4	370.9	382.0	381.9	383.6
Machine-tool accessories.....	253.8	255.8	259.1	282.1	448.7	456.9	465.8	481.4
Textile machinery.....	118.4	120.6	120.6	127.0	228.8	236.4	233.6	228.6
Pumps and pumping equipment.....	284.4	295.0	299.7	339.9	593.2	630.4	645.9	768.9
Typewriters.....	80.1	80.6	79.9	70.7	164.4	165.9	164.5	141.7
Cash registers, adding and calculating machines.....	148.6	151.4	154.5	169.9	287.5	298.9	301.2	335.0
Washing machines, wringers, and driers, domestic.....	171.7	171.4	168.3	183.8	327.0	315.4	314.5	322.2
Sewing machines, domestic and industrial.....	137.3	142.1	142.5	118.4	292.1	304.7	305.6	255.2
Refrigerators and refrigeration equipment.....	141.9	145.3	149.0	150.6	260.2	265.0	276.6	269.0
Transportation equipment except automobiles.....	1180.9	1240.9	1286.6	1538.3	2502.8	2645.4	2757.3	3152.7
Locomotives.....	518.0	525.7	526.6	561.2	1194.1	1233.2	1218.0	1280.1
Cars, electric and steam-railroad.....	236.3	239.1	241.4	240.8	487.1	506.4	504.2	471.7
Aircraft, and parts, excluding aircraft engines <sup>5</sup> .....	1560.4	1607.0	1629.1	1925.1	3070.7	3190.3	3234.6	3627.0
Aircraft engines <sup>5</sup> .....	2288.8	2368.8	2403.5	2912.5	3957.0	4279.7	4368.4	5239.2
Shipbuilding and boatbuilding.....	1232.2	1324.5	1405.2	1722.5	2724.6	2906.6	3107.6	3621.1
Motorcycles, bicycles, and parts.....	137.5	136.8	138.4	130.1	268.2	263.3	268.8	226.7
Automobiles.....	163.7	166.1	169.1	180.1	302.9	310.9	319.2	336.5
Nonferrous metals and their products.....	176.3	177.6	176.0	188.3	343.9	348.1	343.0	351.7
Smelting and refining, primary, of nonferrous metals.....	141.8	143.0	143.5	189.1	260.1	265.4	263.7	348.2
Alloying and rolling and drawing of nonferrous metals, except aluminum.....	184.6	187.1	185.2	184.9	362.3	367.0	361.7	340.4
Clocks and watches.....	128.3	129.5	129.0	122.4	278.5	287.5	283.7	249.6
Jewelry (precious metals) and jewelers' findings.....	91.3	91.2	91.4	99.0	162.9	164.4	159.6	161.3
Silverware and plated ware.....	89.4	90.4	89.9	86.7	165.8	169.5	165.6	154.4
Lighting equipment.....	128.3	127.7	128.2	122.0	233.1	233.2	233.6	217.6
Aluminum manufactures.....	300.0	299.2	292.3	333.0	554.0	556.0	542.2	584.5
Sheet-metal work, not elsewhere classified.....	167.5	170.8	171.5	169.7	319.7	335.4	335.2	319.9

See footnotes at end of table.

651654-45-12

TABLE 3.—Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries<sup>1</sup>—Continued

Industry	Employment indexes (1939 average=100)				Pay-roll indexes (1939 average=100)			
	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1944	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1944
<i>Durable goods—Continued</i>								
Lumber and timber basic products.....	104.3	106.5	107.0	113.1	196.3	195.9	196.5	205.8
Sawmills and logging camps.....	74.2	75.8	76.0	80.4	141.2	140.4	140.4	149.1
Planing and plywood mills.....	94.0	96.0	97.2	102.2	166.8	168.0	170.6	171.3
Furniture and finished lumber products.....	101.0	102.9	103.9	105.8	191.6	195.8	196.9	186.0
Mattresses and bedsprings.....	93.8	95.7	97.2	86.8	165.9	172.4	176.1	144.5
Furniture.....	93.7	95.8	96.8	100.1	177.8	182.3	184.0	175.7
Wooden boxes, other than cigar.....	105.1	106.8	107.2	110.7	210.9	214.2	211.3	209.7
Caskets and other morticians' goods.....	97.3	97.9	98.5	99.5	177.7	175.9	179.1	165.5
Wood preserving.....	88.3	89.2	90.4	87.4	196.6	192.4	188.2	174.9
Wood, turned and shaped.....	95.2	97.2	97.9	98.5	176.8	180.3	180.0	171.2
Stone, clay, and glass products.....	109.7	111.4	111.3	115.6	193.3	193.2	189.6	189.4
Glass and glassware.....	124.6	126.5	125.5	132.6	206.1	207.1	202.0	208.7
Glass products made from purchased glass.....	107.8	110.8	109.6	103.6	189.2	192.6	188.4	166.8
Cement.....	67.9	67.6	67.6	72.3	114.5	108.3	106.0	107.8
Brick, tile, and terra cotta.....	71.4	72.0	72.5	76.0	124.1	121.0	119.4	117.3
Pottery and related products.....	115.8	117.6	118.7	125.7	188.6	191.3	186.7	193.2
Gypsum.....	81.7	82.4	81.8	87.4	140.1	144.6	141.2	148.3
Wallboard, plaster (except gypsum), and mineral wool.....	114.0	115.8	117.9	114.9	220.5	214.0	222.1	207.7
Lime.....	80.8	81.8	81.1	89.3	165.2	159.8	155.7	171.9
Marble, granite, slate, and other products.....	70.9	74.7	75.4	66.7	117.5	114.7	115.3	98.4
Abrasives.....	277.0	279.7	277.8	280.7	483.9	495.0	486.6	461.2
Asbestos products.....	123.9	126.5	125.6	133.3	259.2	266.5	263.9	256.7
<i>Nondurable goods</i>								
Textile-mill products and other fiber manufactures.....	91.4	93.2	94.0	98.6	168.3	173.0	173.1	169.8
Cotton manufactures, except smallwares.....	105.0	107.1	108.2	112.5	201.8	206.5	207.3	201.3
Cotton smallwares.....	101.6	101.4	100.1	103.9	193.9	198.0	192.1	177.6
Silk and rayon goods.....	72.0	73.5	74.1	76.3	134.6	139.3	140.0	134.7
Woolen and worsted manufactures, except dyeing and finishing.....	95.2	97.3	97.8	103.9	186.8	193.4	193.1	192.5
Hosiery.....	61.0	62.0	62.6	67.4	98.8	101.2	102.4	102.6
Knitted cloth.....	93.0	94.1	93.9	100.5	165.3	170.3	166.9	167.6
Knitted outerwear and knitted gloves.....	99.1	101.6	102.0	107.9	190.7	195.2	191.8	186.2
Knitted underwear.....	86.6	88.5	89.1	95.1	165.5	169.1	167.8	168.6
Dyeing and finishing textiles, including woolen and worsted.....	86.1	87.9	88.3	94.2	147.5	151.3	151.3	151.6
Carpets and rugs, wool.....	76.4	78.0	78.7	79.6	137.4	140.0	138.3	131.2
Hats, fur-felt.....	62.7	63.7	64.0	65.6	115.9	128.2	126.8	119.0
Jute goods, except felts.....	88.8	90.1	90.0	93.0	174.9	178.9	178.5	169.6
Cordage and twine.....	120.7	123.3	123.8	133.0	231.6	236.1	235.2	240.2
Apparel and other finished textile products.....	103.7	105.9	106.1	111.3	193.0	206.2	202.6	181.0
Men's clothing, not elsewhere classified.....	90.6	92.1	92.5	97.9	167.1	174.4	170.7	158.2
Shirts, collars, and nightwear.....	68.8	70.1	70.2	76.8	128.8	132.9	131.5	130.3
Underwear and neckwear, men's.....	74.1	75.0	74.2	77.5	154.8	158.3	154.5	146.4
Work shirts.....	107.2	106.5	106.3	115.2	208.8	208.7	208.1	203.0
Women's clothing, not elsewhere classified.....	76.2	78.3	78.9	81.5	143.6	157.2	154.3	132.0
Corsets and allied garments.....	75.4	76.9	77.5	81.5	132.2	136.7	137.2	136.4
Millinery.....	80.7	84.8	83.1	79.9	125.8	160.0	155.6	109.3
Handkerchiefs.....	51.8	52.7	53.5	63.4	96.0	99.8	101.1	108.4
Curtains, draperies, and bedspreads.....	62.7	60.6	60.3	75.6	129.4	125.2	120.2	134.9
Housefurnishings, other than curtains, etc.....	100.3	105.1	107.7	90.2	195.4	198.9	209.3	153.0
Textile bags.....	122.2	122.9	120.1	124.4	212.9	214.1	208.3	194.8
Leather and leather products.....	87.9	88.9	89.2	90.9	164.7	167.7	164.3	154.9
Leather.....	82.1	83.3	83.8	86.2	148.3	151.1	149.7	147.0
Boot and shoe cut stock and findings.....	84.5	85.2	84.8	87.0	150.5	150.1	145.1	142.0
Boots and shoes.....	78.2	79.0	79.2	80.3	150.4	153.6	149.9	138.3
Leather gloves and mittens.....	117.2	119.5	120.1	131.6	210.6	215.1	208.1	221.0
Trunks and suitcases.....	145.2	151.8	155.4	146.9	245.8	254.8	257.8	229.1
Food.....	114.1	114.6	116.7	117.2	187.4	187.3	189.1	185.1
Slaughtering and meat packing.....	107.2	113.1	120.3	129.6	167.7	178.2	188.1	206.3
Butter.....	130.3	125.9	120.1	126.7	211.6	196.3	190.1	191.7
Condensed and evaporated milk.....	153.5	143.6	139.1	139.9	263.1	241.1	227.8	221.8
Ice cream.....	96.0	89.4	86.1	93.0	142.2	130.8	125.0	127.7
Flour.....	114.5	117.0	119.4	112.7	201.1	201.0	204.3	180.8
Feeds, prepared.....	137.1	137.5	139.8	129.0	244.7	235.6	241.6	213.4
Cereal preparations.....	125.7	124.5	124.6	126.1	232.5	232.6	227.3	210.4
Baking.....	110.4	111.3	111.5	110.5	170.4	170.2	168.6	159.9
Sugar refining, cane.....	108.2	106.2	107.8	98.7	182.5	181.3	175.6	153.3
Sugar, beet.....	38.3	37.6	40.2	39.6	61.6	58.1	60.4	59.5
Confectionery.....	112.6	116.7	117.1	116.1	191.8	198.5	198.6	183.4

See footnotes at end of table.

TABLE 3.—Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries<sup>1</sup>—Continued

Industry	Employment indexes (1939 average=100)				Pay-roll indexes (1939 average=100)			
	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1944	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1944
<i>Nondurable goods—Continued</i>								
Food—Continued.								
Beverages, nonalcoholic.....	124.1	120.8	119.8	126.6	164.9	159.7	157.0	159.1
Malt liquors.....	138.3	138.1	138.7	133.8	206.8	200.9	200.6	192.1
Canning and preserving.....	75.5	71.2	75.2	74.1	150.0	142.6	149.0	141.2
Tobacco manufactures.....	86.7	87.6	88.1	89.4	160.4	165.2	165.3	142.7
Cigarettes.....	125.3	126.8	128.3	122.7	200.2	207.4	207.6	164.2
Cigars.....	64.6	65.3	65.3	72.9	131.6	135.3	135.4	133.0
Tobacco (chewing and smoking) and snuff.....	93.3	94.8	95.0	81.7	154.6	156.9	157.3	114.8
Paper and allied products.....	113.6	115.7	116.7	118.3	192.8	195.2	195.3	187.6
Paper and pulp.....	104.6	106.3	107.3	106.2	182.0	183.4	182.8	175.1
Paper goods, other.....	116.5	119.1	119.3	125.9	194.0	198.2	198.0	194.9
Envelopes.....	107.5	108.1	109.3	113.2	170.6	170.0	172.6	169.2
Paper bags.....	113.4	116.7	118.0	122.8	199.6	208.3	205.8	200.6
Paper boxes.....	109.5	111.9	112.6	116.1	180.3	182.3	183.7	177.1
Printing, publishing, and allied industries.....	99.4	100.2	100.5	101.2	141.1	142.4	141.1	133.5
Newspapers and periodicals.....	91.7	92.1	91.7	92.9	120.7	120.2	118.3	113.8
Printing, book and job.....	104.0	104.8	106.0	104.9	155.5	157.2	156.5	144.4
Lithographing.....	92.4	94.2	93.6	96.1	133.1	136.9	134.1	130.1
Bookbinding.....	105.2	107.2	108.5	112.3	178.9	186.0	185.3	182.8
Chemicals and allied products.....	219.8	221.6	221.3	208.6	391.3	394.1	389.9	358.8
Paints, varnishes, and colors.....	102.6	104.4	105.0	106.1	167.8	169.5	170.1	163.9
Drugs, medicines, and insecticides.....	183.0	182.0	180.1	189.3	277.1	280.2	277.3	267.8
Perfumes and cosmetics.....	117.6	116.9	118.8	111.4	166.7	168.0	170.2	157.8
Soap.....	97.5	98.3	98.4	100.0	165.9	170.7	169.7	165.0
Rayon and allied products.....	109.9	113.1	113.4	107.7	181.2	181.8	180.2	171.0
Chemicals, not elsewhere classified.....	164.9	165.7	165.7	172.7	295.6	296.7	295.3	295.0
Explosives and safety fuses.....	1357.7	1361.1	1349.1	942.2	2075.7	2091.6	2019.9	1434.0
Compressed and liquefied gases.....	151.3	149.7	151.3	152.6	274.7	270.7	273.2	266.6
Ammunition, small-arms.....	1581.2	1576.2	1544.3	1359.0	3149.9	3167.0	3070.0	2717.7
Fireworks.....	2007.9	2059.2	2156.6	2648.1	5608.1	5759.0	6093.5	7559.7
Cottonseed oil.....	95.2	107.1	121.5	101.5	202.5	224.5	256.7	193.9
Fertilizers.....	144.6	143.4	133.6	139.4	351.3	340.5	301.9	285.7
Products of petroleum and coal.....	126.0	126.2	126.1	121.0	230.6	223.9	223.3	206.4
Petroleum refining.....	126.1	126.1	125.6	117.9	227.2	220.6	218.2	199.6
Coke and byproducts.....	100.3	101.5	102.0	105.4	184.6	182.2	185.8	178.7
Paving materials.....	66.2	62.8	60.5	60.2	124.7	119.5	118.6	111.2
Roofing materials.....	117.8	117.7	118.2	119.9	222.3	213.9	216.2	207.4
Rubber products.....	159.1	162.9	163.4	162.8	296.4	296.7	320.2	281.3
Rubber tires and inner tubes.....	172.2	176.8	178.0	169.3	306.0	301.9	339.8	280.0
Rubber boots and shoes.....	114.3	117.4	118.3	135.8	219.2	216.3	224.2	242.9
Rubber goods, other.....	137.7	140.3	140.0	143.0	256.1	264.5	265.5	249.0
Miscellaneous industries.....	161.8	163.4	163.1	169.3	322.2	326.3	324.6	320.1
Instruments (professional and scientific) and fire-control equipment.....	540.1	541.4	539.2	576.1	1070.4	1068.3	1063.0	1090.5
Photographic apparatus.....	158.7	162.1	162.1	169.1	270.1	275.4	276.1	270.9
Optical instruments and ophthalmic goods.....	200.5	202.7	202.6	219.4	347.5	354.3	350.5	361.5
Pianos, organs, and parts.....	99.0	97.5	95.8	111.5	189.3	188.0	182.4	212.7
Games, toys, and dolls.....	83.5	85.3	87.4	84.0	169.4	178.3	183.7	160.1
Buttons.....	87.5	88.4	87.2	92.1	175.8	180.2	181.1	175.1
Fire extinguishers.....	459.6	470.9	468.1	656.8	1064.7	1072.9	1061.1	1381.0

<sup>1</sup> Indexes for the major industry groups have been adjusted to levels indicated by final 1942 and preliminary 1943 data made available by the Bureau of Employment Security of the Federal Security Agency. Indexes for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures, but not to Federal Security Agency data. The term "production worker" has been substituted for the term "wage earner" which has been used in our previous reports. This conforms with the terminology and standard definitions of classes of workers in manufacturing industries formulated by the Division of Statistical Standards of the U. S. Bureau of the Budget. The use of "production worker" in place of "wage earner" has no appreciable effect on the employment and pay-roll indexes since there is very little difference in the definitions.

<sup>2</sup> Revisions have been made as follows in the indexes for earlier months:

*Metal doors, sash, frames, molding, and trim.*—January 1945 pay-roll index to 262.2.

*Steel barrels, kegs, and drums.*—January 1945 employment index to 134.1.

*Tractors.*—January 1945 employment index to 186.2.

*Line.*—January 1945 pay-roll index to 151.0.

*Asbestos products.*—January 1945 pay-roll index to 265.9.

*Work shirts.*—January 1945 pay-roll index to 199.8.

*Envelopes.*—December 1944 and January 1945 pay-roll indexes to 176.6 and 173.9.

*Buttons.*—December 1944 and January 1945 pay-roll indexes to 166.4 and 178.6.

<sup>3</sup> Comparable indexes from January 1939 are available upon request.

TABLE 4.—Estimated Number of Production Workers in Selected Nonmanufacturing Industries <sup>1</sup>

Industry	Estimated number of production workers (in thousands)			
	April 1945	March 1945	February 1945	April 1944
Mining:				
Anthracite.....	63.0	65.4	65.6	68.4
Bituminous coal.....	305	334	337	360
Metal.....	68.6	69.1	68.9	84.9
Iron.....	24.2	23.9	23.4	28.8
Copper.....	21.7	22.1	22.2	28.4
Lead and zinc.....	14.5	14.8	14.9	17.7
Gold and silver.....	5.5	5.6	5.6	6.1
Miscellaneous.....	2.7	2.7	2.8	3.9
Telephone <sup>2</sup> .....	( <sup>3</sup> )	404	403	407
Telegraph <sup>4</sup> .....	44.4	44.8	44.9	46.0
Electric light and power <sup>5</sup> .....	200	201	201	203
Street railways and busses <sup>5</sup> .....	229	230	229	231
Hotels (year-round) <sup>5</sup> .....	348	352	353	352
Power laundries.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Cleaning and dyeing.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Class I steam railroads <sup>6</sup> .....	1,422	1,423	1,413	1,412
Water transportation <sup>6</sup> .....	155	152	148	119

<sup>1</sup> The term "production worker" has been substituted for the term "wage earner" which has been used in our previous reports. This conforms with the terminology and standard definitions of classes of workers formulated by the Division of Statistical Standards of the U. S. Bureau of the Budget. The use of "production worker" in place of "wage earner" has no appreciable effect on the employment estimates in mining industries since there is very little difference in the definitions. In the power laundries and cleaning and dyeing industries, the omission of driver-salesmen causes a significant difference. New series are being prepared.

<sup>2</sup> Data include salaried personnel.

<sup>3</sup> Not available.

<sup>4</sup> Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies. Data include salaried personnel.

<sup>5</sup> Source: Interstate Commerce Commission. Data include salaried personnel.

<sup>6</sup> Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to, or owned by, the Army or Navy.

TABLE 5.—Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries

Industry	Employment indexes (1939 average=100)				Pay-roll indexes (1939 average=100)			
	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1944	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1944
Mining:								
Anthracite.....	76.1	79.0	79.2	82.6	135.1	149.7	150.2	142.3
Bituminous coal.....	82.3	90.2	90.8	97.1	159.6	204.3	212.6	214.2
Metal.....	77.8	78.4	78.1	96.2	131.2	130.9	129.7	152.5
Iron.....	120.7	118.8	116.6	142.8	213.0	213.1	202.4	229.2
Copper.....	90.9	92.8	93.1	118.8	155.5	153.2	155.3	191.4
Lead and zinc.....	93.1	95.0	95.7	114.2	177.7	180.4	182.4	209.2
Gold and silver.....	22.3	22.6	22.7	24.8	29.8	29.5	29.9	32.7
Miscellaneous.....	67.2	69.2	69.7	99.6	115.0	114.4	118.0	165.1
Quarrying and nonmetallic.....	77.7	76.6	75.4	84.1	151.2	142.5	137.0	150.0
Crude-petroleum production <sup>1</sup> .....	82.7	82.6	82.4	82.0	131.8	132.8	133.7	129.5
Public utilities:								
Telephone.....	( <sup>2</sup> )	127.1	126.8	128.1	( <sup>2</sup> )	162.4	159.0	152.1
Telegraph.....	117.9	118.9	119.2	122.3	169.9	170.8	171.4	173.4
Electric light and power.....	82.0	82.1	82.2	83.1	117.4	116.8	117.3	112.9
Street railways and busses.....	118.3	118.9	118.4	119.2	174.2	175.7	178.9	164.9
Wholesale trade.....	94.9	95.3	95.7	95.1	144.4	141.5	141.5	134.0
Retail trade.....	96.8	99.3	97.2	97.7	132.0	132.9	130.5	124.3
Food.....	103.6	105.7	106.7	106.9	139.9	141.0	141.6	134.4
General merchandise.....	112.4	117.5	111.4	110.9	143.5	147.5	141.8	134.6
Apparel.....	106.7	111.0	102.8	111.4	148.2	153.5	140.6	144.8
Furniture and housefurnishings.....	61.1	62.0	61.7	63.3	88.7	87.4	86.7	85.5
Automotive.....	68.5	68.6	67.6	65.2	106.2	104.3	103.9	93.8
Lumber and building material.....	90.4	89.4	88.6	89.4	135.6	131.5	130.4	124.6
Hotels (year-round) <sup>3</sup> .....	108.0	109.0	109.6	109.2	165.6	166.7	167.9	154.5
Power laundries.....	104.7	105.5	105.4	109.5	162.5	162.2	159.4	155.7
Cleaning and dyeing.....	119.7	117.4	112.8	120.7	194.0	192.3	175.9	179.9
Class I steam railroads <sup>4</sup> .....	143.9	144.1	143.1	143.0	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Water transportation <sup>5</sup> .....	295.5	290.4	281.6	226.1	729.2	724.7	708.5	524.6

<sup>1</sup> Does not include well drilling or rig building.

<sup>2</sup> Not available.

<sup>3</sup> Cash payments only; additional value of board, room, and tips, not included.

<sup>4</sup> Source: Interstate Commerce Commission.

<sup>5</sup> Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to, or owned by, the Army or Navy.

## AVERAGE EARNINGS AND HOURS

Average weekly earnings and hours and average hourly earnings for February, March, and April 1945, where available, are given in table 6 for both manufacturing and nonmanufacturing industries. (For trend of earnings since 1939, see page 109 of this issue.)

The average weekly earnings for individual industries are computed by dividing the weekly pay rolls in the reporting establishments by the total number of full- and part-time employees reported. As not all reporting establishments supply information on man-hours, the average hours worked per week and average hourly earnings shown in this table are necessarily based on data furnished by a slightly smaller number of reporting firms. Because of variation in the size and composition of the reporting sample, the average hours per week, average hourly earnings, and average weekly earnings shown may not be strictly comparable from month to month. The sample, however, is believed to be sufficiently adequate in virtually all instances to indicate the general movement of earnings and hours over the period shown. The average weekly hours and hourly earnings for the manufacturing groups are weighted arithmetic means of the averages for the individual industries, estimated employment being used as weights for weekly hours and estimated aggregate hours as weights for hourly earnings. The average weekly earnings for these groups are computed by multiplying the average weekly hours by the corresponding average hourly earnings.

TABLE 6.—Hours and Earnings in Manufacturing and Nonmanufacturing Industries  
MANUFACTURING

Industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1945	Mar. 1945	Feb. 1945
All manufacturing.....	\$47.16	\$47.43	\$47.37	45.2	45.4	45.4	Cents 104.5	Cents 104.4	Cents 104.3
Durable goods.....	52.99	53.25	53.30	46.5	46.7	46.8	113.9	114.0	113.9
Nondurable goods.....	38.81	38.95	38.69	43.2	43.5	43.4	89.9	89.6	89.2
<i>Durable goods</i>									
Iron and steel and their products.....	52.07	52.09	51.56	47.0	47.1	46.9	110.8	110.7	109.8
Blast furnaces, steel works, and rolling mills.....	56.64	56.10	54.58	47.1	47.0	46.3	120.3	119.5	118.1
Gray-iron and semisteel castings.....	53.13	54.00	53.16	48.0	48.4	48.1	110.8	111.6	110.6
Malleable-iron castings <sup>2</sup> .....	52.37	52.72	52.79	47.5	47.4	47.7	111.2	111.3	110.5
Steel castings.....	53.81	53.84	52.96	46.8	46.9	46.5	114.9	114.7	113.8
Cast-iron pipe and fittings.....	41.82	42.35	43.79	47.2	46.7	47.6	88.9	91.0	91.9
Tin cans and other tinware.....	41.19	41.73	41.87	45.1	45.6	45.8	91.2	91.5	91.5
Wirework.....	50.78	51.90	51.41	47.2	48.1	47.7	107.7	108.1	107.9
Cutlery and edge tools.....	44.66	44.94	45.37	45.9	46.2	46.6	97.7	97.5	97.4
Tools (except edge tools, machine tools, files, and saws).....	47.36	47.35	47.58	47.4	47.3	47.4	100.4	100.1	100.3
Hardware.....	47.87	47.61	47.23	47.2	47.6	47.6	100.5	100.1	99.2
Plumbers' supplies.....	50.07	49.97	50.06	46.6	46.6	47.2	107.5	107.2	106.1
Stoves, oil burners, and heating equipment, not elsewhere classified.....	49.09	48.76	49.27	46.5	46.6	47.1	105.5	104.7	104.5
Steam and hot-water heating apparatus and steam fittings.....	49.87	49.32	49.70	47.4	47.2	47.7	105.1	104.5	104.3
Stamped and enameled ware and galvanizing.....	47.93	48.71	49.18	45.7	46.2	46.6	104.8	105.4	105.6
Fabricated structural and ornamental metalwork.....	53.43	52.29	53.58	47.3	46.5	47.6	112.9	112.5	112.4
Metal doors, sash, frames, molding and trim <sup>2</sup> .....	53.27	53.76	53.54	47.4	48.2	48.1	112.4	111.6	111.3
Bolts, nuts, washers, and rivets.....	51.13	52.21	50.49	48.1	48.5	47.7	106.8	107.3	105.9
Forgings, iron and steel.....	61.71	61.62	62.73	48.1	48.0	48.7	128.4	128.5	128.9
Screw-machine products and wood screws.....	51.73	52.44	52.38	48.4	49.0	49.2	106.8	106.9	106.4
Steel barrels, kegs, and drums <sup>2</sup> .....	46.13	41.90	43.36	45.6	41.9	43.7	101.5	99.9	99.0
Firearms.....	57.56	59.96	59.26	44.7	46.6	46.4	128.7	128.7	127.8

See footnotes on p. 179.

TABLE 6.—Hours and Earnings in Manufacturing and Nonmanufacturing Industries—Continued

## MANUFACTURING—Continued

Industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1945	Mar. 1945	Feb. 1945
<i>Durable goods—Continued</i>									
Electrical machinery.....	\$49.84	\$50.02	\$49.85	46.7	46.6	46.7	106.8	107.3	106.7
Electrical equipment.....	51.91	52.51	52.31	46.9	47.1	47.0	111.1	112.0	111.3
Radios and phonographs.....	43.22	43.04	43.05	46.1	45.9	46.3	93.5	93.4	93.1
Communication equipment.....	48.04	47.18	47.31	46.1	45.7	45.9	103.8	103.0	102.8
Machinery, except electrical.....	55.51	56.07	56.13	48.1	48.6	48.8	115.3	115.3	115.1
Machinery and machine-shop products.....	54.82	55.06	55.02	48.2	48.7	48.7	113.5	113.0	112.9
Engines and turbines <sup>2</sup> .....	58.28	59.91	60.70	47.4	48.0	48.4	123.3	125.1	125.5
Tractors <sup>2</sup> .....	52.86	52.98	53.11	45.6	45.9	46.2	115.8	115.5	114.9
Agricultural machinery, excluding tractors.....	54.18	54.68	54.12	47.0	47.5	47.3	115.3	115.1	114.4
Machine tools <sup>2</sup> .....	59.53	60.49	60.34	50.2	50.9	51.0	118.7	118.8	118.3
Machine-tool accessories.....	60.86	61.70	61.82	49.4	49.8	50.5	123.3	123.2	122.7
Textile machinery.....	50.33	51.03	50.68	49.3	49.9	49.4	102.6	102.8	102.7
Typewriters.....	49.40	49.56	49.52	48.6	49.0	49.1	101.7	101.1	100.8
Cash registers, adding and calculating machines.....	58.70	59.91	59.12	48.0	48.7	48.3	122.9	123.7	123.0
Washing machines, wringers and driers, domestic.....	50.45	48.49	49.23	46.6	45.5	46.8	108.3	106.6	105.1
Sewing machines, domestic and industrial.....	57.44	57.99	57.89	51.0	51.4	51.6	113.2	113.6	113.2
Refrigerators and refrigeration equipment.....	52.66	52.58	52.76	46.1	46.1	46.6	114.2	113.9	113.3
Transportation equipment, except automobiles.....	60.86	61.22	61.56	46.8	47.1	47.2	130.0	130.0	130.4
Locomotives.....	65.42	66.58	65.65	47.7	48.7	48.7	137.2	136.6	134.9
Cars, electric and steam-railroad.....	54.16	55.71	55.03	45.5	46.5	45.6	118.9	119.8	120.7
Aircraft and parts, excluding aircraft engines.....	55.09	56.25	56.22	46.8	47.1	47.3	119.3	119.4	118.9
Aircraft engines <sup>2</sup> .....	59.62	62.29	62.67	45.8	47.1	47.4	130.0	132.1	132.3
Shipbuilding and boatbuilding <sup>2</sup> .....	64.89	64.63	65.12	47.1	47.0	47.1	138.4	137.6	138.2
Motoreycles, bicycles, and parts.....	53.97	53.25	53.73	48.8	48.7	49.2	110.6	109.3	109.3
Automobiles.....	58.21	59.01	59.49	45.5	46.1	46.5	128.0	128.0	127.9
Nonferrous metals and their products.....	50.94	51.13	50.76	47.1	47.3	47.1	108.1	108.1	107.8
Smelting and refining, primary, of nonferrous metals.....	50.42	49.61	49.08	47.1	46.5	45.9	107.7	106.7	106.9
Alloying and rolling and drawing of nonferrous metals, except aluminum.....	56.39	56.40	56.14	48.9	48.7	48.8	115.4	115.8	115.2
Clocks and watches.....	45.02	46.06	45.57	46.3	47.1	47.0	97.2	97.9	97.1
Jewelry (precious metals) and jewelers' findings <sup>2</sup> .....	45.78	46.07	44.68	45.7	46.2	45.0	99.3	99.0	98.3
Silverware and plated ware.....	48.98	49.53	48.65	47.0	47.5	46.9	104.1	104.3	103.8
Lighting equipment <sup>2</sup> .....	47.79	47.73	47.63	45.0	45.3	45.3	105.6	105.4	105.2
Aluminum manufactures.....	50.99	51.20	51.15	47.1	47.4	47.3	108.3	108.0	108.0
Lumber and timber basic products.....	35.18	34.38	34.40	43.6	43.1	43.3	80.7	79.8	79.4
Sawmills and logging camps.....	34.05	33.15	33.11	43.1	42.5	42.6	79.0	78.0	77.7
Planing and plywood mills.....	38.70	38.27	38.38	45.2	44.9	45.5	85.5	85.1	84.4
Furniture and finished lumber products.....	37.81	37.99	37.95	44.3	44.7	44.8	85.3	85.0	84.7
Furniture.....	38.67	38.78	38.94	44.2	44.7	44.8	87.8	87.4	87.2
Caskets and other morticians' goods.....	41.94	41.32	41.90	46.3	46.0	46.4	90.8	90.2	90.6
Wood preserving <sup>2</sup> .....	35.35	34.10	33.12	44.8	44.2	43.0	78.6	77.2	77.0
Stone, clay, and glass products.....	41.36	40.77	40.10	44.5	44.2	43.8	92.9	92.3	91.6
Glass and glassware.....	41.74	41.27	40.74	42.8	42.8	42.4	97.8	96.8	96.0
Glass products made from purchased glass.....	36.31	36.27	35.71	44.3	44.0	43.4	82.0	81.6	81.9
Cement.....	45.19	43.10	42.25	47.6	46.0	45.5	95.0	93.7	92.8
Brick, tile, and terra cotta.....	35.90	34.69	34.06	43.3	42.3	41.8	81.9	81.4	80.8
Pottery and related products.....	37.81	37.78	36.56	42.0	42.3	41.1	90.7	90.7	90.1
Gypsum.....	44.66	45.77	44.96	48.1	48.5	47.9	92.6	94.4	93.8
Lime <sup>2</sup> .....	39.75	38.06	37.05	40.6	48.1	47.3	80.6	79.1	78.6
Marble, granite, slate, and other products.....	43.07	39.95	39.98	45.6	43.5	43.4	94.6	91.7	91.6
Abrasives.....	48.96	49.74	49.08	48.1	48.5	48.4	101.8	102.5	101.4
Asbestos products <sup>2</sup> .....	48.64	48.85	48.71	48.0	48.5	48.6	101.3	100.7	100.2
<i>Nondurable goods</i>									
Textile-mill products and other fiber manufactures.....	30.84	31.07	30.88	41.9	42.4	42.3	73.5	73.3	73.1
Cotton manufactures, except smallwares.....	27.70	27.79	27.63	42.3	42.5	42.4	65.5	65.4	65.2
Cotton smallwares.....	35.43	36.21	35.66	43.6	44.6	44.2	81.5	81.4	80.8
Silk and rayon goods.....	29.83	30.33	30.17	41.6	42.5	42.4	71.6	71.3	71.1

See footnotes on p. 179

TABLE 6.—Hours and Earnings in Manufacturing and Nonmanufacturing Industries—Continued

## MANUFACTURING—Continued

Industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1945	Mar. 1945	Feb. 1945
<i>Nondurable goods—Continued</i>									
Textile-mill products, etc.—Continued.									
Woolen and worsted manufactures, except dyeing and finishing	\$36.52	\$36.95	\$36.79	42.2	42.9	42.9	Cents 86.5	Cents 86.2	Cents 85.8
Hosiery	29.83	29.96	30.07	38.0	38.5	38.6	78.4	77.8	77.9
Knitted cloth <sup>2</sup>	33.10	33.61	33.21	43.3	44.0	43.6	76.4	76.6	76.1
Knitted outerwear and knitted gloves	32.47	32.45	31.77	40.5	40.3	40.1	79.4	79.5	78.1
Knitted underwear	28.07	28.10	27.78	40.9	41.4	41.0	68.6	67.7	67.5
Dyeing and finishing textiles, including woolen and worsted	35.55	35.81	35.73	45.4	45.7	45.6	78.5	78.4	78.3
Carpets and rugs, wool	41.48	41.39	40.54	43.7	44.1	43.7	95.2	94.0	93.1
Hats, fur-felt	43.18	46.94	46.18	39.7	42.2	41.8	108.7	110.9	110.3
Jute goods, except felts	35.22	35.49	35.47	44.9	45.0	45.1	78.4	78.8	78.7
Cordage and twine	34.13	34.06	33.79	45.2	45.3	45.5	75.3	75.0	74.2
Apparel and other finished textile products									
Men's clothing, not elsewhere classified	32.64	34.06	33.41	37.8	39.0	38.8	86.2	87.4	86.2
Shirts, collars, and nightwear	34.90	35.65	34.69	39.0	40.0	39.7	88.5	88.5	86.7
Underwear and neckwear, men's	26.31	26.59	26.15	37.8	38.7	38.2	69.7	68.8	68.7
Work shirts <sup>2</sup>	27.99	28.21	27.78	37.7	38.1	37.8	73.8	74.0	73.9
Women's clothing, not elsewhere classified <sup>2</sup>	21.10	21.25	21.23	36.8	37.0	37.4	57.2	57.3	56.7
Corsets and allied garments	41.15	43.71	42.70	36.4	37.8	37.6	109.9	112.2	110.6
Millinery	30.38	30.92	30.77	39.6	40.4	40.7	76.9	76.8	75.7
Handkerchiefs	37.86	45.88	45.56	31.4	35.2	35.5	99.0	104.5	103.5
Curtains, draperies, and bedspreads	24.37	24.89	24.84	37.0	37.8	38.2	65.7	65.8	64.9
Housefurnishings, other than curtains, etc. <sup>2</sup>	27.58	27.51	26.64	37.2	37.3	36.7	73.5	73.4	72.7
Textile bags	33.66	32.70	33.59	41.9	40.7	41.8	80.3	80.4	80.4
Leather and leather products	30.54	30.51	30.37	42.4	42.3	42.2	72.0	72.1	72.0
Leather	35.74	36.00	35.23	42.0	42.5	42.2	85.1	84.8	83.5
Boot and shoe cut stock and findings	45.21	45.45	44.69	46.4	46.5	46.3	97.5	97.7	96.9
Boots and shoes	35.94	35.58	34.69	43.6	43.0	42.6	83.7	83.8	82.6
Leather gloves and mittens	34.05	34.46	33.56	41.1	41.8	41.5	82.3	82.0	80.7
Trunks and suitcases	30.74	31.03	29.89	37.6	38.2	37.5	82.0	81.4	79.8
	35.52	35.15	34.71	41.8	41.9	42.7	84.9	82.6	80.7
Food									
Slaughtering and meat packing <sup>4</sup>	39.18	38.95	38.69	45.0	45.1	44.9	87.0	86.4	86.1
Butter	42.62	42.94	42.80	45.9	46.3	46.8	93.0	93.0	91.7
Condensed and evaporated milk <sup>2</sup>	36.08	34.67	35.19	47.5	46.1	46.5	74.1	73.3	74.2
Ice cream	39.33	38.41	37.40	51.2	50.6	50.0	76.8	75.9	74.8
Flour <sup>2</sup>	40.75	40.23	40.00	47.2	46.8	46.2	82.9	82.5	82.2
Cereal preparations	44.22	43.33	43.21	50.1	49.7	49.6	88.4	87.3	87.0
Baking <sup>2</sup>	47.00	47.45	46.35	48.1	48.0	47.4	97.7	98.8	97.7
Sugar refining, cane	38.86	38.51	38.18	45.5	45.5	45.2	85.3	84.6	84.3
Sugar, beet	40.33	40.81	38.94	46.5	47.7	46.0	86.6	85.5	84.7
Confectionery <sup>2</sup>	40.37	38.69	37.65	39.9	39.5	38.2	101.2	98.0	98.6
Beverages, nonalcoholic	31.29	31.23	31.12	41.0	41.5	41.8	76.5	75.3	74.6
Malt liquors	35.05	34.97	34.44	43.5	43.3	42.7	80.7	80.5	80.4
Canning and preserving	52.92	51.45	51.15	45.9	44.9	44.8	115.0	114.2	113.9
	32.10	32.28	32.05	40.9	41.3	40.7	79.1	78.8	79.4
Tobacco manufactures									
Cigarettes	31.22	31.80	31.71	42.3	42.9	43.0	73.8	74.1	73.7
Cigars	33.93	34.73	34.43	43.2	44.1	44.0	78.6	78.7	78.2
Tobacco (chewing and smoking) and snuff	29.10	29.60	29.61	41.4	42.2	42.3	70.0	70.1	69.9
	28.85	28.82	28.82	41.7	41.4	41.6	69.2	69.6	69.3
Paper and allied products									
Paper and pulp	40.63	40.35	40.05	46.5	46.3	46.3	87.4	87.1	86.5
Envelopes <sup>2</sup>	43.95	43.60	43.03	48.8	48.5	48.2	90.1	89.9	89.1
Paper bags	38.04	37.66	37.82	44.9	44.6	45.0	84.8	84.4	84.0
Paper boxes	35.84	36.08	35.50	43.8	44.6	43.9	82.3	82.1	81.4
	36.30	36.01	36.06	43.7	43.6	44.0	83.1	82.5	82.0
Printing, publishing, and allied industries									
Newspapers and periodicals	46.50	46.58	45.74	41.2	41.6	41.0	112.9	112.1	111.5
Printing, book and job	50.60	50.15	49.39	38.7	38.2	38.2	128.8	127.5	127.1
Lithographing <sup>2</sup>	44.96	45.14	44.40	42.6	43.1	42.5	106.1	105.7	104.9
	48.40	48.70	48.11	44.3	44.9	44.3	109.0	108.5	108.6
Chemicals and allied products									
Paints, varnishes, and colors	44.77	44.78	44.27	45.7	45.9	45.5	98.0	97.5	97.2
Drugs, medicines, and insecticides	47.91	47.51	47.29	48.1	48.0	47.6	99.8	99.3	99.5
Soap	35.89	36.44	36.48	42.7	43.6	43.4	84.3	83.8	84.2
Rayon and allied products	48.46	49.44	49.11	48.1	48.7	48.7	100.8	101.6	100.9
Chemicals, not elsewhere classified	40.19	39.18	38.72	43.3	42.6	42.1	92.8	92.0	92.0
	53.83	53.78	53.63	47.3	47.3	47.3	113.9	113.7	113.4

See footnotes on p. 179.

TABLE 6.—Hours and Earnings in Manufacturing and Nonmanufacturing Industries—Continued

## MANUFACTURING—Continued

Industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1945	Mar. 1945	Feb. 1945	Apr. 1945	Mar. 1945	Feb. 1945
<i>Nondurable goods—Continued</i>									
Chemicals and allied products—Continued.							Cents	Cents	Cents
Explosives and safety fuses.....	\$47.18	\$47.63	\$46.41	44.9	45.3	44.4	105.0	105.1	104.6
Ammunition, small-arms.....	45.12	45.51	44.96	45.8	46.3	46.0	98.6	98.3	97.7
Cottonseed oil.....	28.88	28.45	28.64	51.5	51.5	52.4	56.1	55.3	54.6
Fertilizers.....	33.07	32.79	31.12	48.2	48.4	46.3	68.6	67.8	67.5
Products of petroleum and coal.....	58.30	56.65	56.58	48.5	47.4	47.3	120.3	119.5	119.6
Petroleum refining.....	61.26	59.43	59.14	48.4	47.3	47.1	126.8	126.0	126.1
Coke and byproducts.....	50.25	49.00	49.79	48.4	47.1	47.5	104.9	104.1	104.8
Roofing materials.....	48.50	46.72	47.04	49.9	48.7	49.1	97.3	95.9	95.7
Rubber products.....	51.93	50.62	54.40	45.7	45.3	47.3	113.6	111.7	114.9
Rubber tires and inner tubes.....	59.75	57.29	64.04	46.3	45.3	48.7	129.4	126.0	131.4
Rubber boots and shoes.....	43.07	41.42	42.59	45.6	44.0	45.5	94.5	94.1	93.6
Rubber goods, other.....	43.63	44.26	44.42	45.1	45.6	45.9	96.8	97.1	96.7
Miscellaneous industries.....	45.49	45.62	45.43	45.8	46.1	46.0	99.3	99.0	98.8
Instruments (professional and scientific) and fire-control equipment.....	57.67	57.36	57.31	49.8	49.9	49.8	115.9	115.1	115.2
Pianos, organs, and parts.....	46.23	46.62	46.11	45.2	45.5	45.0	102.6	102.8	102.9

## NONMANUFACTURING

Mining:							Cents	Cents	Cents
Anthracite.....	\$45.72	\$48.76	\$48.68	39.7	41.4	41.7	115.3	117.9	116.4
Bituminous coal.....	43.44	52.26	53.89	36.6	43.8	45.1	118.3	119.7	119.0
Metal.....	47.47	47.05	46.74	45.6	45.0	45.0	104.0	104.2	103.5
Quarrying and nonmetallic.....	41.98	40.26	39.27	48.0	46.5	45.5	87.4	86.8	86.0
Crude-petroleum production <sup>2</sup> .....	53.89	54.31	54.93	45.2	46.2	46.4	119.1	117.5	118.3
Public utilities:									
Telephone.....	( <sup>3</sup> )	40.60	39.75	( <sup>3</sup> )	42.8	42.5	( <sup>3</sup> )	95.1	93.8
Telegraph <sup>4</sup> .....	37.33	37.20	37.23	44.8	44.7	44.7	83.3	83.2	83.2
Electric light and power.....	50.08	49.77	49.76	43.7	44.2	44.0	113.8	112.3	112.2
Street railways and busses.....	48.65	48.81	50.28	51.0	51.2	51.5	95.6	94.7	96.5
Trade:									
Wholesale <sup>4</sup> .....	44.51	43.51	43.45	43.2	42.9	42.8	103.1	101.6	101.3
Retail.....	27.69	27.21	27.32	39.5	39.3	39.7	76.9	75.9	75.6
Food.....	32.14	31.76	31.44	40.1	39.9	39.9	75.9	75.2	75.2
General merchandise.....	22.83	22.37	22.52	34.2	34.5	35.1	65.3	64.1	63.5
Apparel.....	29.05	29.03	28.77	35.8	35.9	36.5	81.6	81.5	79.0
Furniture and housefurnishings.....	39.54	38.65	38.75	44.4	44.1	44.2	89.6	87.3	86.8
Automotive.....	43.63	42.80	43.23	46.6	46.4	46.9	94.0	93.6	93.5
Lumber and building materials.....	39.04	38.05	37.98	43.8	43.5	43.3	89.8	88.9	88.9
Hotels (year-round) <sup>7</sup> .....	23.99	23.97	24.07	44.3	44.8	44.5	53.3	52.9	53.7
Power laundries.....	28.98	28.80	28.31	43.8	43.8	43.4	66.3	66.0	65.3
Cleaning and dyeing.....	33.41	34.03	32.28	43.9	44.3	43.4	76.9	77.5	75.8
Brokerage.....	64.32	66.40	64.03	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Insurance.....	47.11	47.39	45.81	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Private building construction.....	54.42	54.49	52.89	40.0	40.0	39.1	136.0	136.3	135.2

See footnotes on p. 179.

## Civilian Labor Force, May 1945

THE civilian labor force increased by 100,000 persons between April and May 1945 to a total of 52,030,000, according to the Bureau of the Census Monthly Report on the Labor Force. Employment increased by 140,000, while the volume of unemployment declined by 40,000 to a level of 730,000.

The increase in employment between April and May was the result of divergent movements in agricultural and nonagricultural employment. A seasonal gain of 200,000 in farm employment more than offset a decline of 60,000 in nonfarm employment.

Unfavorable weather conditions in many farm areas during the May 1945 Census week (6th to 12th) was the dominant factor behind the unusually small increase in agricultural employment between April and May this year. The addition of approximately 200,000 women to the agricultural working force brought the total number of women working on farms to 1,500,000—about equal to the level of the same month in 1944; men totaled 6,450,000 or 640,000 less than in May 1944.

The relatively slight change in nonagricultural employment between April and May 1945 corresponds closely to the situation between these

## Footnotes to Table 6:

<sup>1</sup> These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked during any part of one pay period ending nearest the 15th of the month. As not all reporting firms furnish man-hour data, average hours and average hourly earnings for individual industries are based on a slightly smaller sample than are weekly earnings. Data for the current and immediately preceding months are subject to revision.

<sup>2</sup> Effective January 1945 the term "production worker" has been substituted for "wage earner." Since there is only a slight difference in their definitions there is no appreciable effect on the employment and pay-roll data; however, noticeable differences in averages of hours and earnings occurred in a few industries. For these, the January 1945 averages comparable with the current data relating to "production workers" are listed below only for those series of averages affected.

*Condensed and evaporated milk.*—49.6 hours and 74.6 cents.

*Flour.*—87.5 cents.

*Baking.*—\$38.02 and 83.9 cents.

For several other industries, some current averages are not comparable with those previously published. This is in part caused by the change from "wage earner" to "production worker". For these industries, the January 1945 averages comparable with the current data relating to "production worker" are listed below only for those series of averages affected.

*Malleable-iron castings.*—48.0 hours and 109.8 cents.

*Metal doors, sash, frames, molding, and trim.*—47.1 hours and 109.8 cents.

*Engines and turbines.*—\$60.15 and 47.4 hours.

*Machine tools.*—51.0 hours.

*Aircraft engines.*—46.7 hours and 133.7 cents.

*Shipbuilding and boatbuilding.*—48.1 hours.

*Jewelry (precious metals) and jewelers' findings.*—\$44.30 and 97.1 cents.

*Lime.*—78.4 cents.

*Asbestos products.*—\$48.69, 49.0 hours, and 99.4 cents.

*Knitted cloth.*—75.5 cents.

*Work shirts.*—\$20.80.

*Women's clothing, not elsewhere classified.*—\$41.13 and 108.4 cents.

*Confectionery.*—74.4 cents.

*Lithographing.*—\$48.59 and 108.7 cents.

*Crude-petroleum production.*—118.4 cents.

<sup>3</sup> Revisions have been made as follows in the data for earlier months:

*Steel barrels, kegs, and drums.*—January 1945 to 43.2 hours.

*Tractors.*—January 1945 to \$53.44 and 46.6 hours.

*Lighting equipment.*—May, June, and October, 1942 to 85.0, 88.2, and 92.2 cents, respectively; October 1942 to \$40.74. Comparable averages for June 1942 are \$38.69, 43.6 hours, and 89.4 cents. Complete series from January 1939 available upon request.

*Wood preserving.*—January 1945 to \$33.38 and 43.2 hours.

*Lime.*—January 1945 to \$36.35 and 46.3 hours.

*Housefurnishings, other than curtains, etc.*—January 1945 to \$32.50.

*Envelopes.*—December 1944 and January 1945 to \$37.91 and 37.92.

<sup>4</sup> Corrections in annual average hourly earnings shown in mimeographed release LS 45-3061:

*Slaughtering and meat packing.*—1943 average should be 87.2 cents instead of 78.2 cents.

*Wholesale trade.*—1941 average should be 79.3 cents instead of 70.3 cents.

<sup>5</sup> Not available.

<sup>6</sup> Excludes messengers and approximately 6,000 employees of general and divisional headquarters and of cable companies.

<sup>7</sup> Cash payments only; additional value of board, room, and tips, not included.

months in 1943. The sharp decline between April and May 1944 reflected the fact that the Census enumeration in April 1944 referred to the employment status during Easter week, when many teen-age youths were on temporary jobs. The level of nonagricultural employment in May 1945 was approximately the same as it was a year previous—the gain among women during the year being about equal to the loss among men.

Between May 1944 and May 1945 the size of the armed forces increased by about 1 million.

*Civilian Labor Force in the United States Classified by Employment Status and by Sex, April and May 1940-45<sup>1</sup>*

[Source: U. S. Department of Commerce, Bureau of the Census]

Item	Estimated number (in thousands) of persons 14 years of age and over <sup>2</sup>											
	1945		1944		1943		1942		1941		1940	
	May	April	May	April	May	April	May	April	May	April	May	April
Total civilian labor force.....	52,030	51,930	52,840	52,060	53,550	52,540	54,340	53,850	53,880	53,090	53,890	53,310
Unemployment <sup>3</sup> .....	730	770	880	770	920	950	2,310	2,740	5,120	5,810	7,490	7,800
Employment.....	51,300	51,160	51,960	51,290	52,630	51,590	52,030	51,110	48,760	47,280	46,400	45,510
Nonagricultural.....	43,350	43,410	43,360	43,790	43,720	43,720	42,980	42,690	39,550	38,870	36,480	36,530
Agricultural.....	7,950	7,750	8,600	7,500	8,910	7,870	9,050	8,420	9,210	8,410	9,920	8,980
<i>Males</i>												
Civilian labor force.....	33,790	33,840	34,910	34,880	36,260	35,990	39,820	39,710	40,270	40,230	40,640	40,220
Unemployment <sup>3</sup> .....	430	430	420	440	530	520	1,460	1,890	3,700	4,310	5,550	5,970
Employment.....	33,360	33,410	34,490	34,440	35,730	35,470	38,360	37,820	36,570	35,920	35,090	34,250
Nonagricultural.....	26,910	26,940	27,400	27,750	28,520	28,680	30,740	30,330	28,610	28,180	26,220	25,960
Agricultural.....	6,450	6,470	7,090	6,690	7,210	6,790	7,620	7,490	7,960	7,740	8,870	8,290
<i>Females</i>												
Civilian labor force.....	18,240	18,090	17,930	17,180	17,290	16,550	14,520	14,140	13,610	12,860	13,250	13,090
Unemployment <sup>3</sup> .....	300	340	460	330	390	430	850	850	1,420	1,500	1,940	1,830
Employment.....	17,940	17,750	17,470	16,850	16,900	16,120	13,670	13,290	12,190	11,360	11,310	11,260
Nonagricultural.....	16,440	16,470	15,960	16,040	15,200	15,040	12,240	12,360	10,940	10,690	10,260	10,570
Agricultural.....	1,500	1,280	1,510	810	1,700	1,080	1,430	930	1,250	670	1,050	690

<sup>1</sup> Estimates for period prior to November 1943 revised Apr. 24, 1944.

<sup>2</sup> All data exclude persons in institutions.

<sup>3</sup> Includes persons on public emergency projects prior to July 1943.

# Recent Publications of Labor Interest

July 1945

## Coal Industry

*Bituminous coal in 1943, including data on lignite.* By W. H. Young and others. Washington 25, U. S. Department of the Interior, Bureau of Mines, 1944. 86 pp., charts; processed. (Mineral industry surveys, Mineral market report No. 1238.)

Gives salient production, employment, labor productivity, and mechanization statistics, for the United States.

*Coal mining: Report of the Technical Advisory Committee.* London, Ministry of Fuel and Power, 1945. 149 pp., diagrams. (Cmd. 6610.) 1s. net, His Majesty's Stationery Office, London, W. C. 2.

This committee, known as the Reid Committee, recommended a sweeping reorganization of the coal industry of Great Britain to attain a higher degree of efficiency. The problems of the industry were approached from the technical side.

*The case against nationalization of the coal mines.* By A. K. McCosh. London, Colliery Guardian Co., Ltd., [1944]. 24 pp.

Point by point discussion, by the chairman of the Scottish Colliery Owners, of nationalization and alternate suggestions.

*A plan for coal, being the report to the colliery owners.* By Robert Foot. London, S. W. 1, Mining Association of Great Britain, 1945. 67 pp.

Contains the recommendations of the author (chairman of the Mining Association of Great Britain) for the reorganization of the coal industry under a central coal board whose decisions would be binding, with background information.

*Scottish coalfields: The report of the Scottish Coalfields Committee.* Edinburgh, Scottish Home Department, 1944. 184 pp., maps, charts. (Cmd. 6575.) 3s. net, His Majesty's Stationery Office, Edinburgh.

Description of the coalfields, present and future prospects of the industry, and conditions under which the mine workers live. Recommendations are made for betterment.

## Education and Training

*Data for State-wide planning of veterans' education.* By Ernest V. Hollis. Washington 25, Federal Security Agency, Office of Education, 1945. 69 pp. (Bulletin, 1945, No. 4.) 15 cents, Superintendent of Documents, Washington 25.

Study of the age and previous schooling of members of the armed forces, made for the purpose of estimating the number of veterans likely to return to school and college.

*The national apprenticeship program.* Washington 25, U. S. War Manpower Commission, Bureau of Training, Apprentice-Training Service, 1945. 8 pp.

Brief, nontechnical explanation of the origin, organization, and operation of the program.

*Training for victory: A special report on the war industries training program of the Board of Education of the City of New York, for the three years beginning July 8, 1940, and ending June 30, 1943.* New York, Board of Education, 1944. 62 pp., charts, illus.

Describes the program inaugurated in the public high schools of New York City to train workers for skilled jobs in war industries.

EDITOR'S NOTE.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

*Vocational education for a changing world.* By F. Theodore Struck. New York, John Wiley & Sons, Inc., 1945. 550 pp., reading lists. \$3.50.

The numerous subjects treated include the safeguarding of the general welfare through vocational education, vocational-education surveys and how to make them, vocational guidance and adjustment services, trends and emergency needs, and pertinent Federal and State legislation.

*A Escola Técnica Nacional, [Brazil].* By Adalberto Mario Ribeiro. (In *Revista do Serviço Público*, Departamento Administrativo do Serviço Público, Rio de Janeiro, December 1944, pp. 64-97, illus.)

Most of this article is devoted to details of operation of the National Technical School in Rio de Janeiro, but there is some information on the historical development and the present status of industrial education in Brazil as a whole, with statistics of expenditures for such education in recent years and of enrollment in industrial schools in 1944.

### *Employment and Rehabilitation of Veterans*

*Manual explanatory of the privileges, rights, and benefits provided for all persons who are, or have been, members of the armed forces of the United States and of those dependent upon them.* Washington 25, U. S. Government Printing Office, 1944. 221 pp. (Senate doc. No. 152, 78th Cong., 2d sess.)

*Reemployment of veterans.* New York, Time, Inc., Service on Postwar Information, 1945. 60 pp., bibliography.

Presents information on Government plans for the demobilization of the armed forces, the various agencies that will assist the veterans to make the transition to civilian life, the position and responsibility of the employer in this transition, and related subjects.

*War and post-war rehabilitation and reconditioning.* New York 22, Baruch Committee on Physical Medicine, 1944. 28 pp.

Summary of the rehabilitation programs of the different armed services of the United States, together with a statement of the facts and philosophy bearing on rehabilitation and developments in physical medicine, and other relevant material.

*Report of the [Australian] Repatriation Commission for year 1943-44.* Canberra, 1944. 27 pp.

Account of the kinds of protection afforded to ex-servicemen and their families, and statistics of benefits paid during the year ended June 30, 1944.

*Britain and the veteran.* New York 20, British Information Services, Information Division, 1945. 20 pp. (I.D. 595.)

Describes the order in which members of the armed forces are to be demobilized between the end of the European war and the defeat of Japan, and lists the benefits guaranteed to ex-service personnel in paid leave, clothing, gratuities, reinstatement in employment, and training. Special provisions for the disabled are included.

### *Employment and Unemployment (General)*

*Fiscal policy for full employment.* By John H. G. Pierson. Washington 6, National Planning Association, 1945. 54 pp. (Planning pamphlet No. 45.) 25 cents.

Defines the role of Federal revenue and expenditure policies in an over-all program designed to maintain assured full employment while promoting private enterprise, public welfare, and equitable taxation. Proposes substantially increased public expenditures for health, education, housing, conservation and development of natural resources, and social security, and certain tax changes to secure better adjustment to the principle of ability to pay. Recommends flexible, compensatory policies, operating on an insurance principle, to assure full employment "without waiting for our basic expenditure policies and our basic tax policies to strike an ideal balance."

*Estimates of wartime and postwar employment in California.* Sacramento 14, State Reconstruction and Reemployment Commission, December 1944. 89 pp.; mimeographed.

The report states that the number of employed civilians in California increased 40 percent, as compared with an increase of 20 percent in the country as a whole, from April 1940 to June 1943. The commission estimates that within a year after military demobilization from 666,000 to 835,000 jobs may be lost in the State, some of them being replaced by peacetime jobs, but in the meantime demobilization from the armed forces will add to the demand for work. There is a discussion of proposals for the expansion of peacetime employment. The volume is summarized in the commission's pamphlet No. 6, entitled "How many jobs for Californians?"

*Seasonality of employment in Ohio.* By Viva Boothe and Sam Arnold. Columbus, Ohio State University, Bureau of Business Research, 1944. 247 pp., charts. \$4.

Contains indexes of seasonality of employment, by industry, for male and female employees and for wage earners, clerical workers, and salespeople for most of the industries. The uses of indexes of seasonality are discussed, one of the uses being the planned dovetailing of seasonal employment among two or more employing firms (as described in more detail in Research Monograph No. 35 by the same agency).

*The population and employment outlook for the anthracite region of Pennsylvania.* By James C. Rettie. Philadelphia 7, U. S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station, 1945. 25 pp., map, charts; mimeographed. (Anthracite survey paper No. 6.)

A survey undertaken to determine how much contribution could be made by the forest resources to the alleviation of unemployment and improvement of general economic conditions. The report contains estimates of migration, calculation of the future population and labor force, and prospects for employment from 1945 to 1950. It is stated that even the most optimistic estimate that can be reasonably justified indicates a deficiency of about 100,000 jobs in the anthracite region.

*Memorandum on the Government White Paper on employment policy (Cmd. 6527).* Newcastle upon Tyne, Northern Industrial Group, 1945. 16 pp., diagrams. (Publication No. 2.) 6d.

Analysis of the British Government's employment policy in terms of the problems of industrial development.

*Road to prosperity: An employment policy for Britain.* London, S. W. 1, Cooperative Party, [1945?]. 20 pp. 3d.

Makes specific proposals for public controls and cooperative action.

*The employment of prisoners of war in Canada.* (In International Labor Review, Montreal, March 1945, pp. 335-341. 50 cents. Distributed in United States by Washington branch of I. L. O.)

## Housing

*Eleventh annual report of the Federal Housing Administration, for the year ending December 31, 1944.* Washington 25, 1945. 60 pp., charts; mimeographed.

*A million homes a year.* By Dorothy Rosenman. New York 17, Harcourt, Brace & Co., 1945. 333 pp., bibliography, charts. \$3.50.

Deals with the roles of science, business, and Government in meeting the target of a million housing units a year and with the questions of redeveloping slum areas, public assistance to the lowest income families, and the expediency of home ownership.

*Public housing pays dividends.* Newark 4, N. J., Housing Authority of the City of Newark, 1945. 10 pp.

Statistical presentation showing improvements in health and social life of families housed in public projects.

*War housing in the United States.* Washington 25, U. S. National Housing Agency, 1945. 36 pp. 10 cents, Superintendent of Documents, Washington 25.

Describes the methods used in providing war housing and the results of the program.

*Some constitutional aspects of housing legislation.* By Julius H. Miner. (In Illinois Law Review, Chicago, March–April 1945, pp. 305–342.)

Shows the growth in housing legislation and reviews decisions of the courts in cases arising from the exercise of Federal and State powers in connection with the expanding public-housing movement.

*Proceedings of the conference on financing the postwar building boom on a sound basis, New York, December 7, 1944.* New York 18, National Committee on Housing, Inc., 1945. 77 pp.

Includes the addresses to the conference and the discussion, covering such topics as the mortgage lender's attitude and housing standards.

*Housing.* London, Office of Minister of Reconstruction, 1945. 8 pp. (Cmd. 6609.) 2d. net, His Majesty's Stationery Office, London, W. C. 2.

Statement of the objectives of the British Government's housing policy and the organization for carrying it into effect.

### Industrial Accidents

*Industrial-dust explosions.* By Hylton R. Brown. Washington 25, U. S. Department of the Interior, Bureau of Mines, 1945. 7 pp.; mimeographed. (Information circular No. 7309.)

Outlines causative factors in dust explosions and preventive measures, with emphasis on the hazards accompanying the use of plastic and metal powders in new industrial processes.

*Injuries and accident causes in the foundry industry, 1942.* Washington 25, U. S. Bureau of Labor Statistics, 1945. 63 pp., charts. (Bull. No. 805; reprinted from Monthly Labor Review, December 1944, with additional data.) 15 cents, Superintendent of Documents, Washington 25.

*Metal- and nonmetal-mine accidents in the United States during the calendar year 1942 (excluding coal mines).* By W. W. Adams and F. J. Kennedy. Washington 25, U. S. Department of the Interior, Bureau of Mines, 1945. 81 pp., charts. (Bull. No. 461.) 20 cents, Superintendent of Documents, Washington 25.

*Employment and accidents in the petroleum industry of the United States during 1943.* Washington 25, U. S. Department of the Interior, Bureau of Mines, 1945. 36 pp.; processed. (H. S. S. No. 346.)

*Preventing accidents in the oil fields of the United States.* (In Industrial Safety Survey, International Labor Office, Montreal, January–March 1945, pp. 1–13; chart, illus. 50 cents. Distributed in United States by Washington branch of I. L. O.)

*Fatal industrial accidents in Canada, 1944, analyzed according to industries, causes, localities, and months.* (In Labor Gazette, Department of Labor, Ottawa, March 1945, pp. 428–436.)

### Industrial Hygiene

*Bibliography of industrial hygiene, 1900–43—a selected list.* Compiled by Ellen F. Bellingham, J. J. Bloomfield, Waldemar C. Dreessen, M.D. Washington 25, Federal Security Agency, Public Health Service, 1945. 95 pp. (Public health bull. No. 289.) 20 cents, Superintendent of Documents, Washington 25.

*Health hazards in some nonferrous metal smelters.* By Herbert T. Walworth. (In Industrial Medicine, Chicago, April 1945, pp. 367–373; bibliography. 50 cents.)

*Industrial hygiene panel, included in the third Chicago war production conference.* (In Industrial Medicine, Chicago, April 1945, pp. 373–376. 50 cents.)

The various industrial-hygiene services rendered in the United States were discussed by speakers dealing, respectively, with Federal Government agencies, the Illinois State Departments of Labor and Public Health, private consultants and universities, insurance companies, and industry.

*Introduction to industrial medicine.* Edited by T. Lyle Hazlett, M.D. Pittsburgh, University of Pittsburgh, 1944. 216 pp., bibliography.

Lectures by 11 participants in a course on industrial medicine given at the School of Medicine of the University of Pittsburgh, dealing primarily with some major hazards which cause occupational disease, their recognition, action, and treatment. The various benefits to the worker of preemployment and periodic physical examinations are discussed.

*Condições de trabalho nas minas de ouro.* By Decio Parreiras and others. Rio de Janeiro, Ministério do Trabalho, Indústria e Comércio, Serviço de Estatística da Previdência e Trabalho, 1943. 29 pp., illus.

Summary of a medical commission's description of working conditions in the gold mines of Brazil, including information with respect to temperature, hours of work, accidents, fatalities, and illnesses, together with recommendations of the commission.

*Seats for workers in factories.* London, Ministry of Labor and National Service, 1945. 41 pp., illus. (Welfare pamphlet No. 6.) 1s. 6d. net, His Majesty's Stationery Office, London, W. C. 2.

Discusses general principles of factory seating and describes proper types of facilities.

### Industrial Relations

*Extent of collective bargaining and union status, January 1945.* Washington 25, U. S. Bureau of Labor Statistics, 1945. 9 pp., charts. (Bull. No. 829; reprinted from Monthly Labor Review, April 1945, with additional data.) 5 cents, Superintendent of Documents, Washington 25.

*Classified provisions of 17 collective-bargaining agreements covering plant-protection employees in industrial plants.* New York 1, American Iron and Steel Institute, September 1944. 200 pp.; processed.

*Classified provisions of 10 collective-bargaining agreements for white-collar employees.* New York 1, American Iron and Steel Institute, November 1944. 96 pp.; processed.

This volume, dealing with agreements of employees in industries other than iron and steel, is a supplement to an earlier volume (dated May 1944) giving provisions of 15 agreements of white-collar employees, 8 of them with iron and steel companies and 7 with companies in other industries.

*Union agreements in the petroleum-refining industry in effect in 1944.* Washington 25, U. S. Bureau of Labor Statistics, 1945. 19 pp. (Bull. No. 823.) 10 cents, Superintendent of Documents, Washington 25.

*Teachers' contracts—principles and practices.* Washington 6, National Education Association of the United States, Committee on Tenure and Academic Freedom, March 1945. 39 pp. 25 cents.

*The settlement of labor disputes and stabilization of wages by the National War Labor Board, January 1942—December 1944.* Washington 25, U. S. National War Labor Board, 1945. 54 pp., map, charts; processed. Free.

### Labor and Social Legislation

*Labor laws and their administration, 1943: Proceedings of the twenty-eighth convention of the International Association of Governmental Labor Officials, Chicago, October 1943.* Washington 25, U. S. Bureau of Labor Statistics, 1945. 181 pp. (Bull. No. 795.) 25 cents, Superintendent of Documents, Washington 25.

*Wartime wage control and dispute settlement—laws, regulations, general orders, directives, official interpretations, policy statements, promulgated by the Congress, the President, Director of Economic Stabilization, National War Labor Board, etc., as of March 1, 1945.* Washington 7, Bureau of National Affairs, Inc., 1945. 571 pp. \$6.75.

*Legislación social de Puerto Rico, edición de 1944.* Compiled and annotated by Vicente Geigel-Polanco. San Juan, Departamento del Trabajo, 1944. xliii, 928 pp.

Compilation of Puerto Rican social and labor legislation, including certain laws enacted in 1944, with discussion of the basis and character of this legislation.

*Labor legislation in Canada, 1943.* Ottawa, Department of Labor, 1944. 117 pp. Includes a cumulative index covering the basic volume (1937) and supplements, of which the present volume is the fifth.

*Veinte años de legislación social, [Chile].* Santiago de Chile, Dirección General de Estadística, 1945. 255 pp., charts.

Résumé of labor and social legislation since 1924, with statistical data as recent in some instances as 1943, covering such matters as wages, salaries, employment and unemployment, cost of living, family allowances, industrial disputes, labor organizations, and social insurance.

### Manpower

*Manpower in marketing.* By Eugene J. Benge. New York, Harper & Bros., 1945. 294 pp., charts. \$4.

Technical discussion, from the point of view of management, of the selection training, and supervision of salesmen.

*The what-why-how of manpower utilization.* Washington 25, U. S. War Manpower, Commission, Bureau of Manpower Utilization, 1944. 16 pp., chart; processed.

Lists 14 things that must be done in order to attain maximum utilization of manpower in its twofold phases of employing all available manpower and making the most effective use of employed manpower.

*Changes in composition of the older railroad labor force.* (In Monthly Review, U. S. Railroad Retirement Board, Chicago, March 1945, pp. 34-38, 43.)

A study of the trend in the annual number and rate of retirements of railroad employees. It is stated that when the Railroad Retirement Act of 1935 was enacted, the railroads had a comparatively large group of employees past the age of 65. There is a discussion of the effects of the war on the age distribution of railroad workers and of possible postwar changes.

*Survey of retail manpower problems.* Washington 6, Central Council of National Retail Associations, 1944. 34 pp.; processed.

Summary of the results of a survey covering retail stores in two large areas with critical manpower problems, one in which large-scale Government operations affected the supply of labor available to retail stores and one in which war plants predominated. The study includes discussions of methods of recruiting employees, types of workers employed under wartime conditions, and substitutes such as self-service for meeting the shortage of workers.

### Medical Care

*The coordination of medical and Blue Cross plans.* By Louis S. Reed and Henry F. Vaughan. (In Journal of the American Medical Association, Chicago 10, May 5, 1945, pp. 22-25. 25 cents.)

Data from a survey, conducted for the U. S. Public Health Service, of the 19 voluntary prepayment medical-care plans sponsored by local and State medical societies of the country, and their structural relationships to Blue Cross hospital plans. Complete unification of hospital and medical plans into a health-service plan seems to the authors to provide the final and best solution.

*A Federal program of public health and medical services for migratory farm workers.* By F. D. Mott, M.D., and M. I. Roemer, M.D. (In Public Health Reports, Federal Security Agency, Public Health Service, Bethesda 14, Md., March 2, 1945, pp. 229-249. 10 cents, Superintendent of Documents, Washington 25.)

Account of the extensive program carried on by the Office of Labor, U. S. War Food Administration, for safeguarding migrant farm labor under its jurisdiction.

*Medical care needs and plans for rural people in North Carolina.* A series of newspaper articles by C. Horace Hamilton. [Raleigh, North Carolina State College of Agriculture and Engineering?], 1945. 13 pp.; mimeographed.

*Organized medical care in Chile.* By A. Flores and Manuel de Viado. (In International Labor Review, Montreal, March 1945, pp. 302-329. Reprints of article in Spanish translation available at 10 cents. Distributed in United States by Washington branch of I. L. O.)

*Medical services in industry in Great Britain.* By Robert R. Hyde. (In International Labor Review, Montreal, April 1945, pp. 433-458. 50 cents. Distributed in United States by Washington branch of I. L. O.)

*A national health service: Debate on the Government's White Paper in the House of Commons, March 16 and 17, 1944, and in the House of Lords, March 16 and 21, 1944.* London, S. W. 1, Conservative and Unionist Party Organization, [1944]. 32 pp. 6d.

### *Pensions and Old-Age Assistance*

*Analysis of selected State-wide retirement systems for municipal employees.* Olympia, Wash., Association of Washington Cities, 1945. 14 pp.; mimeographed. (Bull. No. 16, series B.)

In addition to the analysis of retirement systems for municipal employees in a number of States, the publication contains details of the retirement system proposed by the Association of Washington Cities for all municipal employees of the State, and the recommendations of a committee of the Municipal Finance Officers Association of the United States and Canada concerning administration of such plans.

*Estimated cost of old-age and survivors insurance.* By I. J. Sollenberger. (In *Quarterly Journal of Economics*, Cambridge, Mass., May 1945, pp. 427-450. \$1.25.)

Part I presents cost estimates for the present Federal program, without change, in 1955, 1980, and 2,000; Part II presents similar estimates, with assumed changes in the program.

*Pension and profit-sharing plans.* New York 17, Research Institute of America, 1944. 61 pp. (Research Institute analysis 29a.)

Analysis, motivated primarily by the employer's tax problem, of the factors to be considered in the selection and operation of pension and profit-sharing plans, together with model forms and texts of pertinent legislation and regulations. The present upsurge in the number of such plans submitted to the U. S. Treasury for approval is explained by this report as due, in part, to their privileged status under the legislation freezing wages and salaries.

*There's hope for our old age.* By Homer Wickenden. (In *Trained Nurse and Hospital Review*, New York 16, April 1945, pp. 249-251. 20 cents.)

Account of the National Health and Welfare Retirement Association, Inc. (New York City), recently established under the sponsorship of Community Chests and Councils, Inc., for the purpose of enabling nonprofit organizations to insure their employees under a group, joint-contributory plan for annuities and death benefits. An estimated half-million workers in health and welfare organizations, who are not covered by the Federal Social Security Act, are eligible to participate in the new plan.

*Bibliography on adjustment in old age.* Prepared by Erich Rosenthal for a Committee of the Social Science Research Council. [Chicago, 1944.] 44 pp.; processed.

Annotated list of publications classified under the following major heads: Demographic, social, and economic aspects [including employment]; The aged in the modern family and community; Psychological aspects; Theoretical and comparative aspects.

*A handbook for old age counselors: The method of salvaging, rehabilitating, and reconditioning old people used in the Old Age Counseling Center in San Francisco, California.* By Lillian J. Martin. San Francisco, Geertz Printing Co., 1944. 84 pp., bibliography.

*Old age in the new world.* By Emily D. Samson. London, Pilot Press, Ltd., 1944. 60 pp., illus. (Target for tomorrow.) 4s. 6d.

A study of the needs of old people in Great Britain, provision for their economic security, care in sickness and infirmity, and other closely related subjects, with recommendations. Data on pensions and homes for the aged in certain other countries are included.

### *Postwar Reconstruction*

*Forecasting postwar demand.* By Arthur Smithies. (In *Econometrica*, Chicago 37, University of Chicago, January 1945, pp. 1-53, charts; discussion, pp. 54-59. \$1.75.)

Discussion of the techniques of forecasting postwar demand. It is stated that the general problem dealt with is to explain the demand for the various components of the gross national product, and to estimate the employment of labor that results from a given gross national product.

*International labor standards—a key to world security.* By Emil Rieve. New York 3, Textile Workers Union of America, C. I. O., [1945?]. 16 pp., charts.

Although the establishment of international labor standards is not a new idea, the study suggests that adherence to such standards should be a condition for participation in world trade. Such a plan is compared with the Fair Labor Standards Act, which prescribes adherence to that act as a condition for participation in interstate commerce. The adoption of an international code, the author believes, is desirable in order to protect workers in countries in which industrial development is taking place and to protect higher living standards, where they exist, by preventing trade competition based upon substandard working conditions.

*The manpower aspects of the national program of demobilization and adjustment in the United States and in foreign countries.* Washington 25, U. S. War Manpower Commission, Reports and Analysis Service, 1944. 71 pp.; processed.

*Problems of the postwar world.* Edited by Thomas C. T. McCormick. New York, McGraw-Hill Book Co., Inc., 1945. 526 pp. \$3.75.

Contains twenty papers on economic policy, Government and society, and international relations. Subjects of particular interest in the field of postwar labor policy include income and employment, labor organizations, social security, taxation, education, and the functions of Government. The papers deal not with prophecies or forecasts, but with policies and developments viewed by the authors as feasible or desirable.

*A statistical summary of the Lake Charles area, Calcasieu Parish, Louisiana: Statistical data on war and prewar employment and industry for use by local groups formulating plans for the postwar period.* Washington 25, U. S. Bureau of Labor Statistics, December 1944. 16 pp.; mimeographed. (Industrial area statistical summary No. 24.) Free.

*The economic problems of France.* By T. Balogh. (In Bulletin of Institute of Statistics, Oxford, England, April 7, 1945, pp. 61-78.)

Covers the period from the armistice in 1940, showing the impairment of productive capacity and transportation, the fall in production, and the interaction of inflationary forces and demands for higher pay. The author offers suggestions for a solution by an attack from different angles simultaneously, such as the procurement and control of supplies, subsidies to producers, and the recall of banknotes and the issuance of a limited new supply.

*A planned economy or free enterprise—the lessons of history.* By E. Lipson. London, Adam & Charles Black, 1944. 318 pp. 15s. net.

Account of England's first planned economy and an attempt to apply the lessons of history in outlining a postwar reconstruction program.

*The future of India.* By Penderel Moon. London, W. C. 1, Pilot Press, 1945. 80 pp., maps, charts, illus. 5s. net.

Deals with the economic and political problems of India and what the writer thinks India and Great Britain must do to solve them.

### *Prices, Price Control, and Rationing*

*Price flexibility and employment.* By Oscar Lange. Bloomington, Ind., Principia Press, Inc., 1944. 114 pp., diagrams. (Cowles Commission for Research in Economics, Monograph No. 8.) \$2.

A study of price flexibility in its theoretical aspects. The author criticizes traditional theories of price rigidity as the cause of unemployment of labor and of other factors of production.

*Report of the [Canadian] Wartime Prices and Trade Board, January 1, 1944, to December 31, 1944.* Ottawa, 1945. 78 pp., charts.

Reviews price policy and procedure, supply and distribution problems, and the situation as to foods, farm equipment, textiles, and various other categories.

*Inflation in wartime China.* By Choh-Ming Li. (In Review of Economic Statistics, Cambridge 38, Mass., February 1945, pp. 23-33.)

Discussion of the extent of inflation and its causes, and the reasons for the failure of the different types of price control.

*A comparison of the rationing systems in Germany and the United Kingdom.* By C. Fraser Brockington, M. D. (In Public Health, Society of Medical Officers of Health, London, W. C. 1, February 1945, pp. 54, 55. 2s. 6d.)

*Anuario estadístico de 1943, Tomo II.* San Salvador, Dirección General de Estadística, 1944. 385 pp.

Contains retail prices of various items of food, fuel, industrial products, construction materials, and livestock in 1943, by months, and for the year for 14 city markets, in El Salvador.

### *Wages and Hours of Labor*

*Average hourly earnings in the explosives industry, June 1944. Hourly earnings in the ammunition-loading industry, 1944.* Washington 25, U. S. Bureau of Labor Statistics, 1945. 17 and 15 pp. (Bulls. Nos. 819 and 827; reprinted, respectively, from issues of Monthly Labor Review for March and April 1945, No. 819 with additional data.) 10 cents each, Superintendent of Documents, Washington 25.

*Union wages and hours in the building trades, July 1, 1944. Union wages and hours in the baking industry, July 1, 1944. Union wages and hours in the printing trades, July 1, 1944.* Washington 25, U. S. Bureau of Labor Statistics, 1945. 60, 62, 61 pp.; charts. (Bulls. Nos. 815, 816, 820; reprinted, respectively, from the January, February, and March issues of the Monthly Labor Review, with additional data.) 10, 10, 15 cents, Superintendent of Documents, Washington 25.

*Salaries in the safety department.* (In Industrial Relations, Dartnell Corporation, Chicago, April 1945, pp. 15, 34. 35 cents.)

*Wages during the war.* London, W. C. 2, Labor Research Department, 1944. 56 pp. 1s.

Gives information on changes in wages, hours of labor, collective bargaining, cost of living, and related data, for Great Britain.

*Guaranteed annual wages.* By Jack Chernick and George C. Hellickson. Minneapolis, University of Minnesota Press, 1945. 146 pp., bibliography. \$2.50.

Discussion of annual-wage plans, including the interest and participation of labor and the role of Government in such plans. The authors favor widespread adoption of the guaranteed annual wage.

### *General Reports*

*Report of the [British Guiana] Department of Labor for the year 1943.* Georgetown; Demerara, British Guiana, 1944. 16 pp.

Includes information on employment and wages in sugar, bauxite, and other industries, cost of living, industrial accidents, industrial relations, labor organizations, and labor legislation.

*China among the powers.* By David Nelson Rowe. New York, Harcourt, Brace, & Co., 1945. 205 pp., maps. \$2.

A well-documented study of China's power, made in order to evaluate the probable position of China in the generation after the war. It gives information on potential labor force and productive power (agricultural and industrial), and analyzes certain problems of industrial development and social organization.

*An analysis of the sources of war finance and estimates of the national income and expenditure, [Great Britain], in the years 1938 to 1944.* London, [Treasury], 1945. 55 pp. (Cmd. 6623.) 1s. net, His Majesty's Stationery Office, London, W. C. 2.

Includes data on income from wages and other sources, total employment, and average weekly hours worked in principal industries, and a breakdown of personal expenditures by type of product and service.

*Report of the Textile Labor Inquiry Committee, [Bombay, India]: Vol. II—Final report.* Bombay, 1941. 508 pp.

The latest survey of the textile industry in Bombay, showing wages in detail, arrangements for adjusting pay to living costs, and information on hours of work, shifts, welfare work, labor management, and other subjects.

*New South Wales statistical register for 1942-43: Part V, Mining.* Sydney, Bureau of Statistics and Economics, 1945. 8 pp. 1s.

Covers production, employment, wages and salaries, days worked, and accidents.



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5

